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SELECTIONS

FROM

THE PHRENOLOGICAL JOURNAL.

SELECTIONS

FROM THE

PHRENOLOGICAL JOURNAL:

COMPRISING

FORTY ARTICLES IN THE FIRST FIVE VOLUMES.

CHIEFLY BY

GEORGE COMBE, JAMES SIMPSON, AND
DR ANDREW COMBE.

EDITED BY

ROBERT COX.

EDINBURGH:

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PREFACE.

THE first Number of the Phrenological Journal was published in December 1823; and the work, of which about fifty quarterly parts have been issued, is at present in its tenth volume. Some of the earlier numbers having now become scarce, or gone altogether out of print, it has been thought advisable to republish, in a cheap and convenient form, the more interesting and instructive papers contained in the first five volumes. The contents of the Phrenological Journal, like those of most scientific periodicals, are of a mixed description; some of the papers relating to matters of comparatively ephemeral importance, or which have been more fully elucidated in subsequent volumes; while others—forming the more numerous class of treatises—are devoted to the exposure of errors yet widely prevalent, or to the discussion and illustration of those abiding phenomena of human nature which can never lose their interest in the eyes of inquiring men. It is almost exclusively from the latter class that the papers now reprinted have been taken. All

have undergone a careful revision, and the names of the authors are now attached to them. In making the selection, the editor has endeavoured so to diversify the subjects treated of, as to shew, in a forcible manner, the extensive applications of which Phrenology is susceptible to human affairs.

There were five principal contributors to the early volumes of the Phrenological Journal, and it was the editor's wish to include the most valuable productions of each. Having ascertained, however, that two of the gentlemen were averse from the publication of their essays in the present volume, he has confined his attention to those of Mr Combe, Mr Simpson, and Dr Andrew Combe, among the conductors; with the addition of a few articles contributed by correspondents.

Edinburgh, 15*th August* 183[illegible]

CONTENTS.

I. Dialogue between a Philosopher of the Old School and a Phrenologist. By GEORGE COMBE, . Page 1
II. The Turnip Story, ... 11
III. Phrenological Explanation of the Vocal Illusions commonly called Ventriloquism. By JAMES SIMPSON, 14
IV. Practical Application of Phrenology on a Voyage, . 33
V. Master James Hubard. By WILLIAM RITCHIE, . 41
VI. Comparative Influence of Nature and Circumstances in the Formation of Human Character. By GEORGE COMBE, ... 47
VII. Observations on Spectral Illusions, and other Illusive Perceptions of the Knowing Organs when in Morbid Excitement; illustrated by a recent Case. By JAMES SIMPSON, ... 54
VIII. Dugald Stewart, Esq. on Milton's Garden of Eden. By GEORGE COMBE, ... 69
IX. Observations on some Objections to Phrenology, founded on a part of the Cerebral Development of Voltaire. By JAMES SIMPSON, ... 75
X. Travels in Phrenologasto. Translated from the Italian of DON JOSE BALSCOPO, ... 88
XI. Scolding of Juries. By GEORGE COMBE, . . 96
XII. Cases of W. C. M. of Edinburgh, and Miss W. of London, farther illustrative, respectively, of the Phrenological Explanation of Ventriloquism and Histrionic Personation. By JAMES SIMPSON, . . 98
XIII. Phrenology applied to Criticism in the Fine Arts. By GEORGE COMBE, ... 113
XIV. Phrenological Experiment. Communicated by Dr ELLIOTSON of London, ... 117
XV. Dr Thomas's Theory of the Temperaments. By ANDREW COMBE, M. D., ... 125
XVI. Result of an Examination, by Mr James De Ville, of the Heads of 148 Convicts, on board the Convict Ship England, when about to sail for New South Wales in the Spring of 1826. By JAMES SIMPSON, . 140
XVII. On the Causes and Cure of Stammering. By ANDREW COMBE, M. D., ... 143
XVIII. Case of Mental Derangement, with Gradual Diminution of the Size of the Head. By GEORGE COMBE, . 152
XIX. Case of Morbid Excitement of the Organ of Number. By Dr ALDERSON of Hull, . . . 157

XX. Size of Head, National and Provincial, observed by an experienced Hat-Maker of London, . Page 158
XXI. On the Size of Hats used by the different Classes of Society. By a Hat-Maker of Dundee, . 170
XXII. Two Remarkable Cases of Spectral Illusion, . 174
XXIII. Phrenological Analysis of Eloquence. By James Simpson, ... 178
XXIV. Additional Remarks on Dr Thomas's Theory of the Temperaments. By Andrew Combe, M. D., 205
XXV. Glasgow Bridewell. By George Combe, . 209
XXVI. Education—Mr Wood's School. By James Simpson, 215
XXVII. Estimate of the Authority of Clever Practical Men in the profounder and more abstract Departments of Science. By George Combe, . . 232
XXVIII. On the Effects of Old Age on the Manifestations of the Mental Faculties, ... 235
XXIX. Observations on the Faculty of Time, and on the Deaf and Dumb Dancing. By James Simpson, 238
XXX. On the Seat and Nature of Hypochondriasis as Illustrated by Phrenology. By Andrew Combe, M. D. 244
XXXI. On the Best Means of Making Converts to Phrenology. By George Combe, . . 266
XXXII. Phrenological Remarks on the Mottos of Armorial Bearings. By James Simpson, . . 268
XXXIII. Phrenology applied to the Education of a Youth. By George Combe, ... 272
XXXIV. Case of a Mechanical Genius. By Andrew Combe, M. D., ... 276
XXXV. Address to Students of Logic and Moral Philosophy. By George Combe, ... 279
XXXVI. Some Observations on the Character of Cromwell, as delineated in the Novel of Woodstock. By James Simpson, ... 292
XXXVII. Historical Notice of Early Opinions regarding the Functions of different Parts of the Brain. By W. C. Trevelyan and George Combe, . . 298
XXXVIII. On the Advantages of Education. By George Combe, 311
XXXIX. Case of Ann Ormerod, a Girl with great deficiency of the Organ of Tune. By Dr G. D. Cameron, 314
XL. Essay on the Question,—Does Phrenology afford a satisfactory Explanation of the Moral and Intellectual Faculties of Man? By Andrew Combe, M. D. 317
Index, ... 360

SELECTIONS.

DIALOGUE BETWEEN A PHILOSOPHER OF THE OLD SCHOOL AND A PHRENOLOGIST.*

Phil. Do you believe in Phrenology?

Phren. Yes, I do. Do you not believe in it?

Phil. No, indeed. It is most ridiculous nonsense.

Phren. How do you know? Have you studied it?

Phil. Not I. It is too absurd to merit a moment's attention.

Phren. In saying so, do you not resemble a person ignorant of geometry, declaring that he does not believe in Euclid's demonstrations?

Phil. This is quite in the usual strain of dogmatic absurdity, in which the phrenologists are so fond of indulging.

Phren. I beg pardon—the absurdity is all on the other side.

Phil. So you are pleased to say; but you never shew us that it is so. Have not the anatomists dissected the brain these two thousand years, and discovered no such organs as those you speak of; and have not the most eminent metaphysicians carefully analyzed every thought and sentiment of the mind, and never discovered such absurd propensities as Destructiveness, Acquisitiveness, and Secretiveness? A person cannot know what Euclid's Elements contain who has not studied them, and any declaration that he did not believe in the demonstrations would be a piece of gratuitous absurdity on his part, at which we might smile, but

* By George Combe.—Vol. i. No. 1, p. 65; and No. 2, p. 200.

with which we could not be angry; but certainly the brain and the mind have been subjected to examination ere the days of Gall and Spurzheim, and there is nothing ridiculous in saying, on the faith of these investigations, that their doctrines are mere extravagancies, unworthy of the least consideration.

Phren. It is quite true that the brain has been dissected, and the mental phenomena have been analyzed, by very acute men, for a very long period of time; but, were the phrenologists to point out fundamental errors in the methods of investigation followed by all previous philosophers, and to shew that they themselves proceed by a surer path to truth, they would reduce all the opinions on which you found to absolute insignificance, while they would be entitled to challenge a becoming attention to their own discoveries.

Phil. I grant you this; but these are mere general declamations in which your sect habitually indulges, without condescending to lay before us tangible and intelligible principles of philosophy.

Phren. "Tangible and intelligible principles of philosophy," as you term them, have been repeated in every work on phrenology, from Gall's first publication to the present day; but you and those on your side of the question have either deliberately shut your eyes against them, or, if you have seen them, have never met them fairly in argument. You have neither refuted nor admitted them, but kept them back in all the discussions, and concealed them from the world, as if they had never been announced.

Phil. with warmth. Sir, I am not aware of any such statements as those you now allude to.

Phren. I beg pardon for any degree of temper appearing in these remarks. They were made more in sorrow than in anger;—but, to return to the point, Did you ever hear the principle announced, that "dissection alone is not sufficient to reveal the vital functions of any corporeal part?" For example, that although anatomists have dissected the human body for ages, they never discovered in its structure the least indication of the fact, that of two sets of nervous fibres running undistinguishably in the same sheath, one is the organ of motion, and the other the organ of feeling, and that one may be injured, and feeling be impaired, while, if

the other continue sound, motion will remain, and *vice versa;* or are you aware, that although the mesenteric glands and the spleen have been often dissected, their functions are still a mystery in physiology?

Phil. Yes, I am aware of the principle, and admit the facts.

Phren. Do you not perceive, then, that it was absolutely impossible for anatomists, by mere dissection, to discover the functions of the brain?

Phil. Well—suppose, for the sake of argument, that I do so—this does not shew that you can discover these functions any more than they.

Phren. Certainly not—if we pursued no other method than that of dissection. It is a vulgar error to suppose, that Dr Gall assigned different faculties to different parts of the brain, *in consequence of dissecting that organ.* This notion has been industriously propagated in the public mind, and yet phrenologists uniformly state it as a fundamental principle of their science, that the vital function of no organic part can be discovered by means of dissection alone. But to proceed. They farther maintain, that by reflecting on consciousness, or on what passes within our own minds, we could never discover the nature of the substance which lies in the interior of the head; and of course, that although different parts of the brain were *de facto* the organs of different mental powers, we could never find out that they were so by this mode of exclusively reflecting on consciousness.

Phil. Well, but what then?

Phren. These are two philosophical facts, which the phrenologists found upon as fundamental principles. I have never seen them contested; but their application is not attended to. If they be sound, the inference from them is irresistible, that those philosophers who have hitherto sought to discover the functions of the brain by dissection alone, or by reflection on consciousness alone, or even by both together, must be as ignorant of these functions as the clown is of Euclid. When, therefore, without pursuing any other mode of inquiry, they are pleased to say that phrenology is perfectly absurd, they approach much nearer to the supposed conduct of this person than they imagine.

Phil. This may do very well to shew that philosophers in general know nothing of the functions of the brain; but it does not shew that the phrenologists are farther advanced.

Phren. True; but they go a step farther. Sir Charles Bell discovered that motion is attached to one set of nervous fibres, and feeling to another, by cutting each at its origin, and observing that the power was instantly lost. Now, Nature has to a certain extent performed this operation to our hand, in regard to different portions of the brain. One man has a much greater quantity of brain lying under the middle of the parietal bone than another; and the phrenologists observe (and that observation has been confirmed by many thousand instances, and falsified in none) that he who has the larger portion manifests a strong natural sentiment of Cautiousness, and that he who possesses the smaller portion, manifests very little of this feeling. The same observation may be made in regard to Ideality, and all the other organs.

Phil. It is easy to represent these as observations of vast importance; but you forget that the two tables of the skull are not parallel, and hence, that whatever external appearances may indicate, you can draw no conclusion as to the size of the brain beneath.

Phren. This is one of the bold assertions made by our opponents, but it is utterly unfounded. Does not the bark indicate the shape of the tree? Does not the shell correspond to the size of the crab? Does not the brain increase in dimensions betwixt infancy and manhood? And does not the skull, in all its varying changes, accommodate itself to its figure? Some persons have averred, that the brain attains its full growth at three, and others at seven years of age; but every hatter's apprentice will tell you that this is a very absurd mistake. It is true, that in cases of disease the skull becomes irregular. In its structure it is then sometimes thicker, sometimes thinner, than in health; but such cases are not those by which phrenology is to be confirmed or refuted. Take a healthy man in the vigour of life, and I affirm, without fear of refutation, that the skull takes its form from the brain, and indicates the real shape of that organ.

Phil. But many anatomists prove the reverse; they ex-

hibit a great variety of skulls presenting the most irregular surfaces.

Phren. I know they do; but they never venture on the assertion, that these form a fair specimen of the skulls of healthy individuals in the prime of manhood. They say nothing on this point, but leave it to their hearers to take it for granted, which they generally do. The phrenologists, on the other hand, assert, that the skulls thus paraded are selections of diseased and extraordinary cases—exceptions to the general rule,—and that they no more afford fair specimens of the structure of the healthy skull than the diseased tibiæ and femora exhibited by the same anatomists afford specimens of the appearance of these bones in a state of health.

Phil. But in every skull which I ever saw, there are divergences from the parallelism of the outer and inner tables.

Phren. True; and this objection is generally stated in a sophistical manner, without specification, to make it tell beyond its real force against phrenology. Variations from perfect parallelism between the two tables of the skull, to the extent of an eighth or a tenth of an inch, are not unfrequently observed in the skulls even of healthy individuals; but then the difference between the development of a large organ and a small organ amounts to a full inch, and frequently to more. Now, to give this objection force, it ought to be asserted, that the bone in a sound skull in middle life is generally found varying from an inch in thickness in one part, to only an eighth of an inch in another, and this so irregularly, that in no instance where a prominence appears can we tell whether we must penetrate through an inch of bone before arriving at the brain, or whether we may not meet with it at an eighth of an inch below the surface. Do you make such an assertion as this?

Phil. No, I do not; but in your smaller organs this eighth of an inch may be fatal to all your observations.

Phren. This is evading the question, as our opponents generally do. If you wish to find the truth, seek for it where it is most palpable in the first place, and afterwards proceed to points of greater difficulty. If you really wish to put phrenology to the test, contrast the heads of persons whose characters you know to differ extremely in one point; and

if the difference of development of the corresponding organ be not palpably obvious, I shall give up the cause. You may then be entitled to talk against it, but not till then.

Phil. But this practice of poking at heads is absurd and ridiculous, and no gentleman can follow it without being laughed at as a fool.

Phren. They who sit enthroned in antiquated and erroneous opinions find it easier to laugh at methods which threaten to hurl them from their high estate, than to offer a valid objection to them by argument. They have been successful in maintaining the laugh for a time, because the real state of the matter in dispute was not generally known. As soon as this is the case, the tables will be turned. An individual is never truly absurd in seeking important knowledge in the only way in which it is to be found; and when the phrenologists have convinced the public, first, of the utter ignorance of their opponents, and, secondly, of the adequacy of their own method of investigation to arrive at truth, the ridicule will attach altogether to the other side. The opponents must stoop to be schooled by those whom they affect to despise, or act upon the maxim,—

"Ne voyons goutte, cherissons l'erreur."

Phil. But you deceive yourselves; your imaginations are heated, and you see facts just because you wish to see them.

Phren. Then it is your duty to observe better and contradict us. You are not entitled to assume our incapacity to observe, without a shadow of evidence of the real existence of this incapacity. We court inquiry; we exhibit our casts, put callipers with a graduated scale into your hands, and request you to examine, and measure, and refute us if you can. Besides, it is a truly ludicrous manifestation of one of our demonstrated organs, *Self-Esteem*, for an opponent to assume that *he himself*, without one moment's attention to the subject, is a better judge of the real nature and merits of phrenology than other individuals who have devoted much time and labour to its investigation. Such a piece of conceit might have passed without severe animadversion while the phrenologists were few in number and obscure; but when societies are formed in various places for its cultivation, professing it to be a well-

founded experimental science,—and when full courses of lectures on it are delivered, and attended, day after day, with patient attention by gentlemen arrived at maturity of judgment and of acknowledged talents and reputation,—such a practice of contemptuous condemnation exposes him who uses it to just ridicule.

Phil. But the fact is, that the votaries of phrenology are all third-rate men—persons without scientific or philosophical reputations. You are not entitled, therefore, to challenge the regard of those who have higher studies to occupy their attention. You complain that they only ridicule and abuse you, and do not venture to challenge your principles or refute your facts; but you do not yet stand high enough in their esteem to give you a right to expect any other treatment. The world has gone on well enough with the philosophy of mind it already possesses, which, besides, is consecrated by great and venerable names, while your system has neither symmetry of structure, beauty of arrangement, nor the suffrages of the learned to recommend it.

Phren. Ferdinand of Spain thinks the world goes on admirably without liberty, and the Grand Turk conceives his people to be blessed by ignorance;—if you belong to their school, and imagine knowledge to be of no value, because men can eat, drink, and sleep, without it, I rejoice that the old philosophy continues to be honoured by your support. The admirers of the new system reckon no moral or physical truth unimportant, just because it is necessarily of divine origin. Besides, you are deciding without examination, and consequently without knowledge, that there is no symmetry or beauty in phrenology. It possesses these attributes in the highest degree; for nature is ever beautiful and harmonious. You smile at this assertion; but you have no *authority* for the opposite opinion. You are aware, moreover, that many great discoveries have been treated with derision at their first announcement. It is at present (1824) little more than ten years since I heard a celebrated poetical baronet play off more bad jokes against an ingenious gentleman who asserted the possibility of lighting London with gas, than he has uttered even against phrenology itself; and yet London is now lighted in the way then ridiculed—

aye, and the baronet's house, too, shines in all the splendour of gas-illumination!

Phil. I grant that the ridicule with which phrenology has been treated argues nothing against it, and proves only its wide departure from preconceived ideas; but you have not answered my remark, that there are no distinguished names among the votaries of your doctrine, the weight of whose reputation might afford some reason for condescending to examine it.

Phren. You have admitted its novelty; and you are aware that men who possess reputation in physiology or mental philosophy would appear to lose rather than gain renown, were they to confess their present ignorance of the functions of the brain and the philosophy of mind, an almost necessary prelude to their adoption of phrenology; and the subject does not lie directly in the department of other scientific men. In this manner it happens, oddly enough, that those who are most directly called upon by their situation to examine the science, are precisely those to whom its triumph would prove most humiliating. Locke humorously observes on a similar occasion, "Would it not be an insufferable thing for a learned professor, and that which his scarlet would blush at, to have his authority of forty years standing, wrought out of hard rock, Greek and Latin, with no small expense of time and candle, and confirmed by general tradition and a reverend beard, in an instant overturned by an upstart novelist? Can any one expect that he should be made to confess, that what he taught his scholars thirty years ago was all error and mistake, and that he sold them hard words and ignorance at a very dear rate? What probabilities, I say, are sufficient to prevail in such a case? And who ever, by the most cogent arguments, will be prevailed with to disrobe himself at once of all his old opinions and pretences to knowledge and learning, which with hard study he hath all his time been labouring for, and turn himself out stark-naked in quest afresh of new notions? All the arguments that can be used will be as little able to prevail, as the wind did with the traveller to part with his cloak, which he held only the faster."* Human nature, sir, is the same now as in the days of Locke.

* Book iv. c. 20, § 11.

Phil. Your allusions, sir, are impertinent. You will never convert mankind to phrenology by such means.

Phren. Pardon, sir; I made no individual application of these remarks. There is, however, another answer to your observations, to which I solicit your attention. Some individuals are born princes, dukes, or even field-marshals; but I am not aware that it has yet been announced that any lady was delivered of a child of genius, or an infant of established reputation. These titles must be gained by the display of qualities which merit them; but if an individual quit the beaten track pursued by the philosophers of his day, and introduce any discovery, although stupendous and new, do you not perceive that his reputation is necessarily involved in its merits? Harvey was not a man of high reputation before he discovered the circulation of the blood, but became such in consequence of having done so. What was Shakspeare before the magnificence of his genius was justly appreciated? The author of Kenilworth represents him attending as a humble and comparatively obscure suitor at the Court of Queen Elizabeth, and receiving a mark of favour in an "Ah! Will Shakspeare, are you there?" And he most appropriately remarks, that here the immortal paid homage to the mortal. Who would now exchange the greatness of Shakspeare for the splendour of the proudest lord that bowed before the Maiden Queen? Or imagine to yourself Galileo, such as he was in reality, a feeble old man, humble in rank, destitute of political power, unprotected by the countenance or alliance of the great—poor, in short, in every thing except the splendid gifts of a profound, original, and comprehensive genius—and conceive him placed at the bar of the Roman pontiff and the seven cardinals—men terrible in power, invested with authority to torture and kill in this world, and, as was then believed, to damn through eternity; men magnificent in wealth, and arrogant in the imaginary possession of all the wisdom of their age—and say who was *then* great in reputation—Galileo or his judges? And who is *now* the idol of posterity—the old man or his persecutors? The case will be the same with Gall. If his discoveries of the functions of the brain, and of the philosophy of the mind, stand the test of examination, and prove to be a correct interpretation of nature, they will surpass, in substantial importance to mankind, the discoveries even of

Harvey, Newton, or Galileo; and this age will in consequence be rendered more illustrious by the introduction of phrenology, than by the butcheries of Bonaparte, or the victories of Wellington. But besides, I could easily shew that the assertion that no men of note have embraced phrenology is not supported by fact.

Phil. There may be some truth in these observations; but what I principally alluded to is the fact, that all the disciples of phrenology are persons ignorant of anatomy and physiology. You delude lawyers, divines, and merchants, who know nothing about the brain; but all medical men, and especially teachers of anatomy, are so well aware of the fallacy of your doctrines, that you make no impression on them. They laugh at your discoveries as dreams.

Phren. This objection, like many others, is remarkable more for boldness than for truth. I have already demonstrated the unavoidable ignorance of medical gentlemen of the old school regarding the functions of the brain, and you may easily satisfy yourself by a little inquiry that this representation was correct. For my own part, before adopting phrenology, I saw Dr Monro, Dr Barclay, and other anatomical professors, dissect the brain repeatedly, and heard them declare its functions to be an enigma, and acknowledge that their whole information concerning it consisted of "names without meaning." This circumstance, therefore, puts the whole faculty, who have not studied phrenologically, completely out of the field as authorities. The *fact*, however, is the very reverse of what you state. Drs Gall and Spurzheim are now pretty generally admitted to be admirable anatomists of the brain, even by those who disavow their physiology; and in the list of the Phrenological Society, out of 86 members, you will find 13 doctors in medicine, and 11 surgeons—a proportion considerably larger than that of the medical profession to society in general.

Phil. Well—but this is a vain discussion, and I have too much to engage my attention at present to listen to any more of your odd opinions. Good morning!

THE TURNIP STORY.*

On the authority of *Blackwood's Magazine* for May 1823, the following dialogue took place among certain *gentlemen*, declared enemies of phrenology and phrenologists, assembled in a pot-house :—

" *Odoherty.* What did your *friend* Brodie† die of, Mr Tickler?

" *Tickler.* Apoplexy, I suppose. His face was as black as my hat.

" *Hogg.* Lucky Mackinnon's bonny face was black too, they were saying.

" *Dr Mullion.* Yes; ' black, but comely.' ‡ I saw her a day or two afterwards,—very like the print.

" *Tickler.* These infernal idiots the phrenologists, have been kicking up a dust about her skull, too, it appears. Will those fellows take no hint?

" *Odoherty. They* take a hint! Why, you might as well preach to the Jumpers, or the Harmonists, or any other set of stupid fanatics. Don't let me hear them mentioned again.

" *Dr Mullion.* They have survived the turnip. What more can be said?

" *Hogg.* The turnip, doctor?

" *Dr Mullion.* You haven't heard of it, then?—I thought all the world had. You must know, however, that a certain ingenious person of this town lately met with a turnip of more than common foziness in his field; he made a cast of it, clapped it to the cast of somebody's face, and sent the composition to the Phrenological, with his compliments, as a *fac-simile* of the head of a celebrated *Swede*, by name Professor Tornhippson. They bit,—a committee was appointed,—a report was drawn up,—and the whole character of the professor was soon made out as completely *secundum artem*, as Haggart's had been under the same happy auspices a little before. In a word, they found out that the illustrious Dr Tornhippson had been distinguished

* Vol. i. No. 1. p. xviii.

† Brodie was a notorious criminal, executed for systematic and long-continued theft and housebreaking.

‡ Proh pudor!

for his Inhabitiveness, Constructiveness, Philoprogenitiveness, &c.—nay, even for "Tune," "Ideality," and "Veneration."

"*Odoherty.* I fear they have heard of the hoax, and cancelled that sheet of their Transactions. What a pity!

"*Hogg.* Hoh, hoh, hoh! The organization of a fozey turnip! Hoh, hoh, hoh, hoh! the like o' that! The Swedish turnip—the celebrated Swede!"—P. 593.

This ignoble discourse was published, by the respectable interloquitors, in the knowledge that the *true* tale of that "weak invention of the enemy," the turnip, was as follows:

In April 1821, a medical gentleman in Edinburgh, aided by a landscape painter, fashioned a turnip into the *nearest resemblance* to a human skull which their combined skill and ingenuity could produce. They had a cast made from it, and sent it to Mr G. Combe, requesting his observations on the mental talents and dispositions which it indicated; adding, that it was a cast from the skull of a person of an uncommon character. Mr C. instantly detected the trick, and returned the cast, with the following parody of "The Man of Thessaly" pasted on the coronal surface:—

There was a man in Edinburg,
And he was wond'rous wise;
He went into a turnip-field,
And cast about his eyes.

And when he cast his eyes about,
He saw the turnips fine;
"How many heads are there," says he,
"That likeness bear to mine!

"*So very like* they are indeed,
No sage, I'm sure, could know
This turnip-head that I have on
From those that there do grow."

He pull'd a turnip from the ground;
A cast from it was thrown:
He sent it to a Spurzheimite,
And pass'd it for his own.

And so, indeed, it truly was
His own in every sense;
For CAST and JOKE alike were made
All at his own expense.

The medical gentleman called on Mr Combe next day, and assured him that he meant no offence, and intended only a joke. Mr C. replied, that he treated the matter en-

tirely as such ; and that if the author of it was satisfied with his share of the wit, no feeling of uneasiness remained on the other side. The story got into the *Caledonian Mercury* at the time, so that the above misrepresentation must have proceeded on the faith that the real facts were by this time forgotten. For nearly six months past, the opponents of phrenology have been chuckling over this story, as a delightful specimen of the accuracy of our science ; and we have been equally amused with the proof it affords of their own gullibility. A human skull is an object which it is *possible* to imitate ; and if, in the instance in question, or in any other instance, the imitation had been *perfect*, a cast from the *fac-simile* would have been just as completely indicative of natural talents and dispositions as a cast from the original skull itself, supposing phrenology to have a foundation in nature. There was a lack, therefore, not only of wit but of judgment, in the very conception of the trick. If the imitation was complete, no difference could exist between a cast from a turnip, and a cast from the skull which it was made exactly to resemble ; if it was imperfect, the author of the joke, by his very departure from nature, encountered an evident risk of his design being detected, and becoming, himself, the butt of the very ridicule which he meant to direct against the phrenologist. This has actually been the result. The imitation was execrably bad, and the cast smelt so strongly of turnip, that a cow could have discovered its origin. We do not mean to say, that the pot-house wits themselves would have been equally acute : far otherwise ; for there cannot be even the shadow of doubt, that, had a cast, taken from a turnip as it grew, without any attempt to make it resemble a human head, been submitted to them, granting to them the unusual advantage of perfect sobriety, *they* would not have discovered the trick.*

* We have reprinted the Turnip Story in the present volume of Selections, because even yet it is in some quarters kept up as a joke against the phrenologists. The medical gentleman by whom the trick was played off, lately told one of the conductors of the Journal, that he had subsequently become as fully convinced of the truth of phrenology as of his own existence, and was devoting considerable attention to the study of it.

PHRENOLOGICAL EXPLANATION OF THE VOCAL ILLUSIONS COMMONLY CALLED VENTRILOQUISM.*

If Phrenology be true, the phenomena of the moral and intellectual nature of man, however hitherto perplexing, must be made plain before it. Indeed, many of its opponents already admit, that it affords at least a *sufficient* explanation of phenomena which have been given up in despair, by metaphysicians of all descriptions, as inexplicable, according to the formula in that behalf, in the present state of human knowledge. This *sufficiency*, however, supplies one of the Baconian requisites for the admissibility of a cause. The other, the existence, is still disputed; phrenologists say it is demonstrated, as will be plain to their antagonists when they condescend to do justice to the evidence.

The nature of the singular art called, or rather miscalled, Ventriloquism, has been variously viewed by philosophical writers, both of the present and of former times. The nearest approach to the truth was undoubtedly made by the French philosophers, who investigated the subject in the year 1770. The light of phrenology enables us now to confirm their views, so far as they go, and, as we humbly think, to complete the demonstration. A brief description and history of this extraordinary vocal illusion, while it is necessary to our present purpose, may not be unacceptable to our readers.

Those who possess the art have invariably the power of imitating with their voice the voices of other persons, the cries of animals, and even the sounds produced by the motion and impulse of inanimate matter. They are always perfect imitators of sounds of every variety and description; but their most mysterious power is that of deluding those they address into the persuasion that the sound comes from a point not only out of, but at a considerable distance from, the speaker's own person. The voice, in such cases, having always a certain stifled sound, as if it originated in the chest, and being often uttered with the mouth nearly

* By James Simpson.—Vol. i. No. 3, p. 466.

shut, at least with very little or no movement of the lips, was long, in ignorance of its true nature, referred to the stomach or belly; whence its name. It is not by any means clear, however, that the deluded would have established the stomach and belly as the *parts of speech*, if the deluders had not themselves directed them thither; and this leads us to a brief statement of what is known historically of this art. It seems to have been much more prevalent in ancient times than we now find it. It was known to the Assyrians, the Egyptians, the Jews, and the Greeks; and their's were just the climates where, great flexibility in the organs of speech being joined with the requisite mental powers, we should have expected it to prevail. Scripture makes many references to the magicians, the wizards, the charmers, *and those that have familiar spirits;* and the profound Selden saw reason to translate the Hebrew *Ob*, plural, *Oboth* (generally translated Python, or magician), by Demon or Spirit, which was believed to dwell in the belly, and speak within the possessed without their exercising their own organs of speech. Accordingly, the Septuagint translates *Ob* by the Greek word *engastrimuthos*, and the Vulgate by *ventriloquus*, both words signifying the same thing, namely, speaking with, or at least from, the belly. This was too valuable a deception not to be practised by the cunning deluders of the superstitious ancients, and it became so common as to form a kind of divination called gastromancy, where the diviner answered without appearing to move his lips, so that the listener believed he heard an aerial voice.

There has been much controversy, even among divines, as to the reality of the ghost of Samuel. Eustathius, Archbishop of Antioch in the fourth century, composed a treatise in Greek, to prove that the supposed evocation of Samuel was the deception of a demon, of which the witch of Endor was possessed. This is, in truth, a treatise on engastrimism, according to the notions then entertained of it; for the Archbishop has no idea that the art was not preternatural. It is by no means clear that Saul saw Samuel, the word *perceived* being more properly *understood*, as he takes his information from the woman with regard to what *did appear*, and is prostrate on the earth when Sa-

muel speaks.* Now, ventriloquism in the woman has been supposed all that was required. The Septuagint calls her *engastrimuthon;* and Selden expressly says, that in the original, this woman spoke by means of *Ob*, or a demon, which word is, in other places of the Old Testament, translated *ventriloquus*. The opinion is common, that the Pythian responses were delivered by the same vocal illusions; and in the Vulgate, the Witch of Endor herself is said *habere pythonem*.

In the earlier ages of Christianity, the same art prevailed; and St Chrysostom and Œcumenius both make mention of diviners who were called *Engastrimandri*. There is no reason to believe that so imposing and profitable an engine to move a rude people was unknown to the necromancers and enchanters of the dark ages; but we have no account of an individual ventriloquist earlier than the sixteenth century, when one appeared in France of the name of Louis Brabant, valet de chambre of Francis First. This man practised his art solely for the purposes of swindling. It is related of him, that being denied the hand of a young woman of fortune and station much above his own, by her father, he renewed his addresses after the father's death, and when in the presence of the lady and her mother, imitated the deceased's voice, which seemed to come from the ceiling of the apartment; with cries and groans he imputed his aggravated tortures in purgatory to his refusal of his daughter to Louis Brabant, and conjured her, "if e'er she did her poor father love," to marry the said Louis forthwith; which, in suitable horror, consternation, and filial piety, she did. The swindling bridegroom succeeded, at the same time, in enriching himself, so as to meet his bride's fortune. He frightened a rich old usurer out of ten thousand crowns, by a well-timed intimation, *en ventriloque*, of what awaited him in purgatory, with a distinct exposition of the *only* method of averting the otherwise certain doom. This accomplished person, we may presume, did much business on a smaller scale, besides these two great *coups du maitre*.

A century after this period, probably in consequence of the appearance of another or other ventriloquists, the first modern attempts seem to have been made to write upon

* 1 Sam. xxviii. 7, 8.

the subject; and Allazzi, an Italian, in 1629, published a work entitled *Leonis Allatii de Engastrimytho Syntagma.* Allazzi, in the same work, translated the Greek treatise of Eustathius into Latin; but his own treatise, as well as that of the Archbishop, is confined to the question of the evocation of the ghost of Samuel, on which controversy the works are erudite and argumentative.

Conrad Amman, a Dutch doctor in medicine, had observed the ventriloquists of the beginning of the last century, and published a Latin treatise at Amsterdam in 1700, to explode the old notion, current, it would appear, till then, that Engastrimism is a demon in the belly. His observations seem to have been made chiefly on an old woman at Amsterdam, who possessed the talent of ventriloquism. His theory was, that the effect was produced by a sort of swallowing of the words, or forcing them to retrograde as it were by the trachea;—by speaking during inspiration of the breath, and not, as in ordinary speech, during expiration.—"Quidquid hactenus," says Conrad Amman, "de voce et loquela dixi, de quotidiana illa et vulgari accipi velim, quæ fit *expirando;* est enim adhuc modus eam per *inspirationem* formandi, qui non cuivis datus est, et quam aliquoties in Gastrimythis quibusdam admiratus sum: et Amstæledami olim *vetulam quandam* audivi utroque modo loquentem, sibique ad quæsita quasi *inspirando* respondentem; ut eam cum viro, duos ad minimum passus ab ea remoto, colloqui dejerassem; vocem enim, inter *inspirandum* absorptam e longinquo venire credebam. Muliercula hæc *Pythiam* agere facile potuisset," &c.

Nothing farther appears on the nature or history of ventriloquism till the year 1772, when a work was published on the subject by M. de la Chapelle, *Censeur Royal* at Paris, and a member of several learned bodies, besides the Royal Society of London. This, although a greatly over-learned work, with a prodigious display of irrelevant erudition, gives a most satisfactory explanation of ventriloquism, which was confirmed by a committee of the Academy of Sciences at Paris, and ultimately by the whole Academy. *We* have the more confidence in the theory, that it is demonstrated to be true, so far as it goes, by what we hold to be the surest of all tests—by phrenology. The existing ventriloquists of M. de la Chapelle's time were two, a Baron Mengen, in

the household of Prince Lichtenstein, at Vienna; and a person of the name of Saint Gille, a grocer at St Germain-en-Laye, near Paris. Both these ventriloquists were communicative, made no secret of their art, and contributed descriptions of their own experiences, to forward the inquiry which seems, in that time of profound peace, to have made some noise in France.

Baron Mengen ridiculed the old prejudice, that ventriloquists speak from, much less with, the stomach and belly; and made no pretence to any other aid than that of the common organs of speech. The Baron's account of himself is, in substance, that he owed his art to a *passion*, which shewed itself in him at a very early age, to *counterfeit* the cries of animals and the voices of persons; and he soon found, that he had the power of *imitating sounds in such a way*, as to give them the appearance of coming from points different from his own mouth. That his organs gained flexibility by use, so as to be able to sustain a long illusion. For the sake of amusing his friends, he made a small figure or doll, with a contrivance with which, by inserting his hand under the dress, he could occasion appropriate motion of the lips. With this figure, from which he could make his voice to appear to come, he carried on droll and often highly satirical conversations. His own words, describing the kind of vocal exertion he made, are as follows: "I press my tongue strongly against my teeth and left cheek, and the voice, which appears articulated by the mouth of the figure, is formed in reality between the teeth and left cheek of my own. For this I use the precaution to *hold in reserve* in the wind-pipe (le gosier*) a sufficient portion of air, either to sing or speak, without the stomach or belly giving any assistance; and it is solely with that portion of air in reserve, *moderated*, retained, and suffered to escape with effort, that I produce the voice which I wish to make heard. Add to that a *quality in my tongue extremely subtile* and rarely possessed, by means of which I articulate all syllables and words (either singing or speaking) without in the least moving the lips; and taking great care to retain to the end of each period, phrase, or sentence, the air which comes from the *lungs*

* This is physically impossible; and the Baron afterwards shews that he means the lungs or chest.

for the renewing of my respiration, *which requires a very good chest.*"

M. Saint Gille was more at hand, and was often visited and experimented upon by M. de la Chapelle. In their first interview, the ventriloquist surprised and rather alarmed the philosopher, by producing a distinct cry of "M. de la Chapelle," as if from the roof of a neighbouring house. On farther acquaintance, M. de la Chapelle accompanied Saint Gille on occasions of many amusing and perfectly innocent applications of his art. On one of these, he addressed many individuals of rank, of both sexes, to their great consternation, as they sat on the grass, at a fête champetre, with many witty personal remarks, for which he had been previously prepared; the effect may easily be conceived. On another, he imposed incessant mass-singing upon a fraternity of monks who had been remiss in their attention to the departed soul of one of their number. The deceased spoke as from the roof of the choir where they were assembled, and uttered loud complaints and awful threatenings against the survivors for their neglect of him.

On some occasions, M. Saint Gille put his powers to good uses, in mortifying vanity, abasing pride, disappointing avarice, and changing selfish and base purposes. Several very diverting instances of these are detailed by M. de la Chapelle.

M. Saint Gille made no mystery of his art more than Baron Mengen, and attributed all his success to an *extreme desire* and continued habit of exercising his organs in that *imitative* way. He gained the accomplishment in a very short time, eight days, at Martinique, by *imitating* another ventriloquist. This circumstance leads M. de la Chapelle into the only mistake he commits, namely, that any one that chooses may become a ventriloquist. It is the very circumstance which forces a phrenologist to the opposite conclusion.

The theory of M. de la Chapelle, as confirmed by the Academy, is in substance as follows: The *same* sound varies in its effect on the ear according to the distance or place from which it comes. But every sound, as it reaches the ear, is a sound that may be imitated. A power of imitating sounds, which we are all accustomed to refer to certain distances and certain situations, is the whole art of

ventriloquism. It is worthy of remark, that by custom the illusion lost its effect on M. de la Chapelle, he referring the words to the mouth of the speaker, which all others referred to distant points. The members of the Academy, commissioned to make the inquiry with M. de la Chapelle, compare this gradation of sound to the imitations of distance in the symphonies of the opera; the distance being judged by the first sound heard, apparently diminishes as the sounds become fainter.

The *savans*, satisfied that the effect produced was *imitation* of the sounds appropriate to certain distances, applied themselves to investigate the nature of the organic power which produced this effect, and referred it to a power acquired by habit over the larynx, by which it could be readily shut and opened to the required degree, with the additional power, from *flexibility* of tongue, to articulate *within* the mouth, or even in the *back part of it*. The constriction and expansion of the larynx they believed to be very fatiguing, and attended with hoarseness after a lengthened exertion. They observed that M. Saint Gille appeared fatigued before the end of his exhibition, and lost some degree of his power to create the illusion; that each exertion was followed by the irritation of a slight cough; and that, when he was *enrhumé*, or (as we translate it in Scotland by a most convenient word) *colded*, he had great difficulty in speaking *en ventriloque*. Hippocrates, treating of a particular ailment of the throat, says, that those affected with it spoke as if they had been Engastrimuthoi. If, say the reporters, there be a diseased state of throat, which produces this effect, it is easy to suppose the effect of the malady imitated, or the throat brought artificially into the same state.

M. de la Chapelle, and the other academicians, unite in their refutation of Conrad Amman's theory, that ventriloquism is articulating during inspiration of the breath. This mistake was repeated, evidently from Amman, by the Abbé Nollet, in his Leçons de Physique Experimentale, 1745.

It is admitted that a low stifled sound may be produced for a few seconds during inspiration; but the high and often strong voice of the ventriloquists can result only from a brisk *expulsion* of air from the *trachea*, by an increased action of the chest. The Amsterdam woman spoke high,

but it was Conrad that concluded she spoke during inspiration. Besides, there is no reply to the objection that inspiration will not account, any more than speaking with the belly, for variations and distances.

Last of all, it was observed that Saint Gille opened his mouth, and even moved his lips; and that, to conceal these movements, he always turned away his face when he spoke *en ventriloque*. When one stood in front of him, and saw his mouth opened and his lips moved, the illusion was destroyed.

We do not think it worth while to occupy our readers with detailing an attempt made to explain the illusion of distance in ventriloquism, by supposing that the speaker avails himself of *artificial echoes*, to throw back the sound to the ear of his hearer. A paper, maintaining this view, was read to the Philosophical Society of Manchester by Mr Gouch, in 1801, and is preserved in the second part of the fifth volume of their Transactions. There is much scientific clearness and justness of exposition in that paper on the laws of acoustics, but these laws are wofully misapplied to ventriloquism. It at once occurs to ask the author of that paper how the ventriloquist is to command even one echo when he wishes it,—one fixed material distant obstacle to reflect the voice? But when he is to modulate his voice gradually as the sound is supposed to advance or retire, or when he shifts the voice from above to below, and all around, where shall he command his succession of echoes, or the change of their position? Mr Gouch saw a ventriloquist, we think of the name of Garbutt, who travelled to most towns in this island about 1796. This ventriloquist made his voice seem to come from the part of the room behind the audience; but if, on Mr Gouch's own shewing, sound will reach the ear by the shortest road, how did it first pass the audience, and then return to them? Garbutt farther brought the voice, as it were, from under the benches on which the spectators sat, *to which locality he first strongly directed their attention*, and he occasionally made it appear to be the voice of a child confined under a glass. Echoes for all these illusions are evidently out of the question. But how did Garbutt carry about his echo with him, when he alarmed a fish-woman in Edinburgh, by making her own fish contradict a declaration of

their freshness? or when he made a poor man unload a whole cart of hay to extricate a crying child, whose voice was heard more and more plainly as the hay diminished, till it concluded with an imp's laugh, when the last particle was examined? The notion of echo seems to have been hinted before, for M. de la Chapelle himself disproves it, by an experiment made by M. Saint Gille in the open park of St German-en-Laye, where he astonished an Italian by speaking to him from every point of the compass.

It cannot have failed to strike the reader, that, as admitted by the French savans, a ventriloquist must cheat the judgment as well as the ear. This is effectually done, as will be made more clearly to appear presently, by establishing a *local*, from which it is intended the audience shall believe that the voice comes. Garbutt had recourse to this finesse in the illusions which he performed.

When we mention Mathews, we consider his powers of vocal illusion as the least of his comic accomplishments; but it is of great consequence for our readers to keep in mind that so perfect a comic imitator as Mathews does possess to a considerable degree that power of imitating sounds, which is called ventriloquism. Indeed, we have observed, that most clever comedians have some degree of the same talent.

Such was the state of this curious question, when means, equally unexpected and ample, have come within our own reach of verifying former theories, and observing for ourselves both directly and phrenologically. This opportunity has been afforded us, and indeed our attention has been called for the first time in our lives to the subject, by the late arrival in Edinburgh of the celebrated Monsieur Alexandre, a native of Paris, and beyond all rivalry the possessor of the most astonishing powers of vocal illusion which we have either heard or read of. This young man has already, at the early age of twenty-five, exhibited his powers in almost every country of Europe. His vocal illusions are displayed in amusing comic pieces, in which he is the sole actor, and which he has exhibited in six or eight different languages. Nay, he performed one of these in English for six months, before he had learned the language, so as to understand what he was uttering; and, it is said, with very few mistakes. He exhibits testimonials from crowned

heads, princes, nobles, and *savans* on the Continent,* and from a great number of persons of rank and literary and scientific eminence in England, of which, besides performing 150 times in London, he visited most of the great towns, all bearing witness to his astonishing powers, and most of them commending his manners and qualifications as a gentleman. He brought letters to many individuals in Edinburgh; one of which was the means of our introduction to him, which has been to us so satisfactory. M. Alexandre's first exhibition was announced to take place in the Caledonian Theatre, to which we went, and watched, as narrowly as we could, every thing he did or said, as he succeeded, by his own unassisted exertions, in engrossing and highly diverting a crowded audience for three hours.†

We shall now endeavour to describe what we saw, as minutely as we observed it narrowly. He performed a sort of drama, the hero of which is a clever young rogue, in the service of an old physic-taking valetudinarian and his careful fantastical wife, upon whom he perpetrates all sorts of mischievous tricks, both in revenge of his own short commons, and in furtherance of a scheme, for which he is well paid, to unite the only daughter to a very agreeable young officer of infantry, quartered in the neighbourhood. Without merit as a comedy, the incidents of this piece, some of them very ludicrous, afforded him the means of exhibiting every variety of his vocal illusion. He represents the whole characters, male and female, young and old, himself, displays *address and quickness* which we never saw exceeded, changes his dress thirty or forty times, with a rapidity which appears almost preternatural, and produces deception so perfect, that the whole *dramatis*

* The kings of Prussia, Bavaria, and Saxony, Princes Blucher, Swartzenberg, Metternich, Wrede, M. Goethe, Blumenbach, &c. It is a curious fact, that the aged Landgravine of Hesse Darmstadt was enabled, by having seen M. Saint Gille in Paris, to compare his powers with M. Alexandre's, to which last she gave a decided preference.

† M. Alexandre's success and popularity in Edinburgh, he himself says, has not been exceeded any where. Besides commanding overflowing houses, he has visited many of the most respectable inhabitants, and made the most favourable impression on all who have conversed with him, by his agreeable appearance, engaging manners, and liberal sentiments.

personæ seem to be bustling and talking at the same moment.*

His change of dress is not, however, more complete than his change of manner, voice, and whole character. He spoke with his own natural voice in the valet; a deep strong voice in the old man; a whining and chattering, and most affected voice in the lady; in a degagé easy style in the dandy officer; and with the softest tripping femininism in the dandy's beloved. Of all these he maintained the character with such judgment and effect, as to convince us of one truth, which our readers are requested to mark, that his histrionic powers, *his talents as an actor*, are very considerable.

As it is of great moment for our phrenological tests in the sequel, to keep steadily in view the power of *imitation*, we may here mention a sort of interlude, which M. Alexandre performed, in which he manifested his possession of that talent, with the farther power of *concealing* self, to a degree of intensity which, till that moment, we could not have believed possible. He exhibited the visages, voices, and manners of different nuns of a convent, where he is supposed to have served *outside* the grate. He is first a very pretty noviciate endeavouring to sing, but covered with bashfulness and heigh-hos!

> "Her pretty oath by yea and nay,
> She could not, must not, durst not play."

In an instant he is the angry abbess chiding her foolish pupil, with a face as round, as flat, and as pitted, as a split muffin, and a voice to suit. Anon he rises, like a ghost from the ground, as Sister Beatrice, with a face double the length of the average of the human countenance. Down

* M. Alexandre told us, that his attendants who attire him behind the scenes, often urge him to wait a reasonable time to prevent doubts of his identity. He paid an unconscious compliment to the unsuspicious British character, when he added, that although on some occasions, on the Continent, he has found it necessary to station a responsible public officer on the stage, *to vouch for him*, he has been delighted with the absence of all suspicion, of which the cordial manner of his British spectators has given him the most encouraging assurances. Some of the changes are almost incredible: the old lady's long train has scarcely disappeared on one side of the stage, when the slim jacketed domestic enters *on the other*, with a frying-pan in his hand to make an omelet for his master.

he sits again, and shows, just above the level of the table, a face as preternaturally broad as the other was long, the said face being the index to the soul of Sister Agnes. A visage reduced to the size of a man's fist now peeps from the hood of sister Angelina. The next face is all gone off to the east, and its successor to the west, till he concludes with Sister Celestine's lamentable paralytic deformity, an exhibition greatly too like reality not to be exquisitely painful to the spectators, and which, we have heard many say, M. Alexandre would gain credit for good taste as well as good feeling by omitting altogether. His other personations, amounting to an absolute change of identity before our eyes, are quite sufficient to establish him the most wonderful *personator* that ever exhibited.*

M. Alexandre's vocal exhibition consisted of two very obviously distinguishable parts: *First*, His mere imitations or changes of voice to suit the different characters in which he *appeared* on the stage; in which he meant no farther illusion, and left the audience to take the personage in their sight for the speaker. In this it is obvious there was comic imitation, but none of the illusion more strictly called ventriloquism. To this class belong his imitations of animals and inanimate things, as a plane, a screw, a saw, an omelet frying, &c. *Secondly*, His ventriloquial efforts. In these he produced the effect of persons speaking from a distance; from the other side of a door, both shut and open; from a trunk, also alternately open and shut; from a chimney-top; and from a cellar; with gradation of the voice as the person in the chimney and cellar ascended or descended. With his ventriloquial exertions alone we have to do here; and in these the illusion of confinement, free-

* M. Alexandre paid a visit to the late Sir Walter Scott, to deliver a letter of introduction. This was put into Sir Walter's hands by a young man of very interesting and genteel appearance, and with the greatest modesty. He read it, and when he looked up to reply, a being stood before him as different in identity from what he had last looked upon, as an old grim French quack-doctor may be supposed to be from the first personage we have described. Sir Walter started, and, with an exclamation of wonder, asked if he could possibly be the same person who had two minutes before delivered him the letter! Our accomplished friend, Mr Joseph, succeeded admirably with two busts of M. Alexandre, one in each of these dissimilar characters, and thus *fixed down* a real instead of an evanescent proof of the power of *personation*, which is especially valuable to phrenology.

dom, distance, and gradual approach and recession, was complete. In M. Alexandre's production of these curious effects we observed several particulars:

1. His voice, to give the illusion of distance or confinement, was invariably a stifled voice; and in changing from confinement to freedom, he dropt ventriloquism, and spoke merely in character, as first above distinguished.

2. He never began to speak *en ventriloque* without previously establishing a point, place, or *local*, or at least direction from, or in which the audience should believe the voice to come. This he did in course of the incidents of the piece, so that all impression of arrangement was prevented, and the audience never dreamed of disputing the *direction* with the performer, but took all that for granted, to his most perfect satisfaction. He aided the illusion by his own action and attitude, as he spoke into a cellar, up a chimney, into a trunk or press, or through a door.

3. We never saw his face, at least his front face, when speaking *en ventriloque;* but we observed it always turned towards us when he spoke as the person in our sight.

4. We observed, that after his ventriloquial exertions he often coughed; and, lastly, he counterfeited inimitably the hoarseness of a severe cold.

On returning from this singular exhibition our own conjectures on the subject of ventriloquism were these:— 1. That by the force of uncommonly acute powers of perception, which nothing that happens around him escapes, whether visible, tangible, or audible (phrenologicè a large endowment of all the knowing organs, particularly *Tune* and *Individuality*), he has become perfect master of sounds in all their varieties and modifications. In this *per se* he may have, and no doubt has, multitudes of rivals. 2. Having got familiar with the intensities of sounds as they alight upon the human ear, from various distances and certain places, he does nothing more than imitate the sound desired, not as it is where uttered, but where heard. It is in either case an imitable sound. It would seem to follow, that the closer the person to be deceived is to the ventriloquist, the illusion must be the more complete, seeing that the sound imitated is the sound that strikes the performer's own ear, which, it is obvious, may not suit the variously arranged spectators in a large theatre. 3. As

the sound which reaches our ears must necessarily vary with the distance it has come, but as each variation is a specific imitable sound, so the ventriloquist has only—assuredly it requires exquisite skill—to vary his imitation progressively, in either direction, to give the perfect illusion of advance and retreat. An analogy occurred to us, in which, if, as yet unknown to ourselves, we have ever been anticipated, we should only have the more confidence. Distance is artificially represented to the eye on the landscape-painter's canvass by gradual diminution, according to the rules of mathematical perspective, of the size of the successive objects; and, according to those of aërial perspective, of the strength of their colouring; from the large and bold foreground, to the diminished distance, almost blending with the tints of the sky. Now, M. Alexandre's vocal illusions are, as it were, the *perspective* of sounds, and address to the ear a gradation which we cannot help associating with the successive distances of the landscape whence they come. What an extent of country a hunting party may be made to traverse, in imagination, in the theatre, by a skilful graduation of the sounds of their bugles, from the faint sound in the distant hills, till the boisterous Nimrods —their tunics of scarlet—are smacking their whips on the stage. As to the direction of the sound, we conjectured this to be exclusively the doing of the imaginations of the audience, when a locality was established. This we put to the test: believing that the performer could do no more than imitate distance, without the possibility of imitating direction, which has no distinctive sound as such; we tried to reverse, in our own minds, the direction of the chimney-top and the cellar, and we found the identity of the sound suit either place. It is obvious that, when a ventriloquist fairly alarms people, he may give any direction he pleases to his voice.

That this *perspective* of sound is the essence of the effect produced we could not doubt; of the physiology of the inquiry—the physical power by which the effect is produced—we were by no means so certain. Organs of speech in the stomach or belly we at once discarded as a barbarous absurdity; but we really saw nothing in the imitations which might not be executed by a person who possessed a

great power over the movements of the larynx, directed by a good ear, and seconded by a very flexible tongue.

We were not disappointed in our hopes to obtain M. Alexandre's own account of his singular powers. He has been as liberal as Baron Mengen and M. Saint Gille, and has unfolded to us his own views on the subject. He makes no mystery of it, and he is perfectly safe in his openness; for his talent is so rare, and his art so difficult, however clearly explained, that it requires the cover of secrecy much as the accomplishment of the man, who stood on his head on the cross of St Paul's Cathedral, required the protection of the patent which was offered him, we think, by George the First.

M. Alexandre assured us,—1. That his voice does not come from his stomach or belly, in which, as he said in ridicule, he has neither tongue nor teeth; and against which inelegant region he has a sort of ill-will, for having occasioned the disgusting as well as absurd name of ventriloquism to an art which is merely vocal illusion. He wished to have offered himself in England as a *professeur* of vocal illusion; but was advised that John Bull loves the marvellous, and would rather give his money to see a man who can speak with his stomach, than one who avowedly can only speak with his mouth.

2. That he possesses uncommon power and flexibility in the organs of speech: he can extend and contract the larynx or windpipe, which has great muscular strength, so as to produce all the gradations from a bass voice of great power to the shrillest squeak; and his tongue has a degree of flexibility and power of change of shape and position in the mouth, which enables him to do any thing with it he pleases. The exertion, he says, does not exhaust or fatigue him.

3. That he is not conscious of speaking even during expiration; certainly he does not speak during *inspiration* upon any occasion. When he speaks *en ventriloque*, he is not aware that he breathes at all, but seems to use a confined supply of air, which he retains in his chest till the period is finished, when he breathes again. He must, however, although unconsciously, expend it in expiration as he speaks. This seems proved by what follows next.

4. That he cannot ventriloquize *with his lips shut.*

5. That he cannot articulate the labial consonants M, B, and P, without using the lips. When he uses these consonants, therefore, he turns away his face from the person he wishes to deceive. He endeavours, as much as possible, to avoid the labials, and then he can speak without the slightest movement of the lips, or of any muscle of the face.

6. That he makes no use of echoes existing, much less does he create any, such a thing being far beyond human power. He scrupulously avoids places where echoes already exist, and this is the first thing he tries.

7. That he deceives the audience into the belief of the direction of the sound, entirely by previously fixing the direction, and trusting, which he never does in vain, to their imagination for the rest. He says that, when he has fairly frightened people, which he has often done, he has no farther trouble; which way soever he looks, that becomes the direction of the dreaded sounds. He once horrified a party of visitors to the embalmed bodies of the Prince and Princess of Lignitz, in Silesia, in the vault in which they had lain 230 years. He first declared himself 250 years old, and that he was present at the interment; and then made the Prince and Princess complain of want of air, in consequence of an order of the magistracy to prevent the coffin being opened to gratify public curiosity. The attendants, in consternation, made no attempt to prevent him from opening the coffins; for which service he received the grateful thanks of the Prince and Princess therein reposing, and an inconvenient quantity of holy water to exorcise him, as he came out of the vault.

Last of all, M. Alexandre declares, that he has a ready perception of the varieties of sound, according to distances, and that each distance having its own *specific* sound, he IMITATES the sound as it is when it reaches his own ear. He has particularly studied this power of graduation, and has repeatedly imitated a person's voice who spoke at intervals as he receded above 300 yards. He has likewise sent a chimney-sweeper up a vent, with instructions to speak down every few yards, and has imitated the voice in its gradations so exactly, that the persons in the room could not tell which was his and which the chimney-sweeper's. On one occasion in Vienna, at Prince Metternich's Hotel,

he hung a rope from the window of an apartment on the third floor from the ground, to which a weight was suspended to serve for a man whom he undertook to pull up, and with whom he conversed every yard or two as he pulled the rope, the voice of the man gradually getting plainer, till he was at the window-sill, when all at once M. Alexandre allowed the rope to slip, and down went the poor man with a scream, and many a groan, as he lay *knocked to pieces* on the ground. The company were terrified, and it required a clear exposition of the illusion to restore their composure. We made the remark to him, that this gradation was like perspective in painting. He answered, that the same comparison is engraved on a medal which was given him by the University of Ghent. This we have seen, but find M. Alexandre mistaken; the medal merely alluding to *modulation* of voice.*

He gave no other account of his change of countenance in the nuns, quack-doctor, &c. than that his endeavour was to CONCEAL HIMSELF, and *imitate*, or, as nearly as possible, *be* another person. He has often *disguised himself* by this means when he wished not to be known. Aware of the severe trial to which such exertions must put the nerves of voluntary motion, and the subservient muscles, we asked him if he has no fears of some permanent *set* in these hideous forms? He answered, that at Manchester he did *remain* the quack-doctor some hours longer than he intended, having walked in the street disguised by that gainly personification. He can remain voluntarily for a great length of time so metamorphosed; and Mr Joseph assures us, that he never varied while his bust was modelling.

Our phrenological readers are well able to finish this sketch for themselves—aware of the strong case of IMITATION which is established at every step as we proceeded; aware, also, that to effect perfect imitation in the voice and manner, nay, in the very countenance and person of another, has been found by numerous cases, and no exceptions, to require the agency of that important power SECRETIVENESS,† which enables all perfect actors (and imitation is

* The reverse of the medal is inscribed as follows:—"Quod, sono vocis *scitè modulando*, sive hæc naturæ dos sit sive artis, notis: ακουστικης legibus aut inludit aut inludere videtur."

† See the Transactions of the Phrenological Society (p. 179), on

only a species of acting) not only to copy what they see and hear, but to *secrete* what they are aware will spoil the illusion if allowed to appear; to exercise in perfection that art consisting in concealing art, which, as actors, they cannot do, unless they conceal *themselves*—unless, by the exercise of this power, they change the tones of the voice, and alter the usual and recognised action of every muscle, by the effects of which on the countenance, the shape, the movements, they are identified as individuals—unless, in short, they sink their own character and very presence, and conjure up the individual to be personated. Who, for one moment, during the unparalleled personation of the Nuns, could recognise, in one point, the individual M. Alexandre?

This combination of Secretiveness with Imitation, then, gives not only the impulse to imitate, which, for the wisest purposes, is part of man's nature, but the power to personate—not only to copy, but for a time to *be* the original. Without Secretiveness, M. Alexandre might imitate the quack-doctor, but he would not *be* the quack-doctor during the exhibition; he would still be M. Alexandre, doing as the quack-doctor does. There are many who possess the power of mimickry to this extent, but this is not *personation*.

From what has been said, it follows obviously that a good ventriloquist must be a perfect imitator of sounds, of all sounds within the compass of his vocal powers; and must possess a great flexibility of larynx and tongue, to execute his imitations. This, in short, is the whole secret of that art, which was for ages considered too wonderful not to be preternatural.

Our readers will naturally look for some information on the actual cerebral development of M. Alexandre, as confirming or shaking our explanation of his talent. We are enabled to gratify them, in consequence of M. Alexandre's having most readily allowed Mr Joseph to take a cast of his head, besides modelling the bust formerly mentioned; and it is impossible to imagine any result more satisfactory. To ourselves it is the more gratifying that we inferred by *anticipation* every prominent organ, on leaving M. Alexandre's first exhibition, and stated our expectations of what his head would turn out, to several friends who were with us.

the nature and range of the faculty of Secretiveness. We make reference to what is thus written before, to satisfy the impartial reader that we do not create the combination to suit the case of M. Alexandre.

1. We expected, of course, that Imitation and Secretiveness would be large, if not very large, especially the latter; and Tune, for variation of sound, we thought requisite.

2. We looked for the organs of the powers of observation to be large, Individuality, Form, Size.

3. From the boldness, energy, confidence, and sustained character of the whole most difficult exhibition, we expected to find Combativeness, Destructiveness, Firmness, and Self-Esteem, all large.

4. From much of his general manner, and from his complete conception of all the affectations of Miss Flirtilla, we anticipated a considerable Love of Approbation. And, lastly, We referred the neatness and cleverness of his arrangements and changes to his Constructiveness, added to his mechanical skill and quickness of observation.

The development was some days after taken by Dr Andrew Combe, who had not seen his exhibition; and it will be seen, by a note of it subjoined,* how invariable nature is, as unveiled by Phrenology. The Imitation and Secretiveness are not exceeded in Mr Joseph's bust of Mathews, or in the cast of Clara Fisher in the collection of the Phrenological Society.

In the same collection is deposited the cast from M. Alexandre's head, presented by Mr Joseph, which all are invited to see, measure, and compare; but especially those who still compliment the good faith of the Phrenologists, by believing, at least by alleging, that they *find* what suits their purpose, in any head whatever.

*1. Amativeness, rather large.
2. Philoprogenitiveness, large.
3. Concentrativeness, full.
4. Adhesiveness, large.
5. Combativeness, rather large.
6. Destructiveness, large.
7. Secretiveness, very large.
8. Acquisitiveness, rather large.
9. Constructiveness, large.
10. Self-Esteem, large.
11. Love of Approbation, rather large.
12. Cautiousness, rather large.
13. Benevolence, large.
14. Veneration, full.
15. Firmness, very large.
16. Conscientiousness, large.
17. Hope, { moderate on one side. / full on the other.
18. Wonder, full.
19. Ideality, full.
20. Wit, full.
21. Imitation, large.
22. Individuality, large.
23. Form, large.
24. Size, large.
25. Weight, large.
26. Colouring, full.
27. Locality, full.
28. Number, rather large.
29. Order, full.
30. Eventuality, large.
31. Time, rather large.
32. Tune, large.
33. Language, full.
34. Comparison, large.
35. Causality, full.

PRACTICAL APPLICATION OF PHRENOLOGY ON A VOYAGE.

25th January 1824.

Mr Editor,—One of the most instructive and delightful occupations which a person engaged in the study of phrenology can have, and one which can never fail him, at home or abroad, in the society of friends or of strangers, of the learned or of the illiterate, is that of observing peculiarities of development, and of tracing the varied natural language and outward manifestations of the predominant faculties in the looks, gestures, speech, and conduct of those with whom he may come in contact. Indeed, I have, ever since I became acquainted with the science, found it to be the most desirable travelling companion a man can have. By its means the phrenologist derives both profit and pleasure, where another man finds only dulness and ennui. Place him, for instance, in a stage-coach or in a steam-boat among strangers, he has no difficulty in passing his time to his satisfaction. He sets about ascertaining what his companions are, not by asking their names, places of abode, and professions, as is the custom in France, but by inspecting their development, the indications afforded by which he knows to be the best and truest certificate of their intellectual talents and moral qualities; and he regulates his conduct accordingly. If he finds a youth with an enormous endowment of Self-Esteem and Love of Approbation, who seems to demand the homage of all about him, and to think himself the most important person present, the phrenologist, knowing from what his airs proceed, instead of taking offence, treats him according to his real merits, and probably amuses himself with studying the peculiar combination of faculties which mark his character. If he finds another man who contradicts every word that is said, and shews himself obstinate in maintaining a disputed point, the phrenologist regards this as springing from a large endowment of Combativeness and Firmness; and, aware that argument only serves to inflame these already too active propensities, he mildly states his opinion, and leaves his friend to keep that which he believes to be right. If, again, he meets with a person in whom Acquisitiveness,

Secretiveness, and Self-Esteem are large in proportion to Conscientiousness and the intellectual organs, he can see no harm in these degenerate days in guarding against such trifling accidents as the disappearance of his purse or his watch. Or if he finds a man with small Comparison and Causality and a small head, he will not try to talk with him on metaphysics or political economy; at least, with the view of acquiring new ideas. But I must stop my illustrations to come to the proper business of this letter, which is simply to give you an account of the cerebral development and manifestations of an individual whose character I had leisure to study during a pretty long voyage in a ship in which he was captain and I a passenger.* The configuration of his head was calculated to strike, but by no means to delight, the observer. He soon saw the worst, however, and he could act accordingly. Subjoined is a note of the development, which, from actual examination, I know to be correct:

1. Amativeness, rather small.
2. Philoprogenitiveness, large.
3. Concentrativeness, rather full.
4. Adhesiveness, rather small.
5. Combativeness, rather large.
6. Destructiveness, very large.
7. Secretiveness, full.
8. Acquisitiveness, large.
9. Constructiveness, large.
10. Self-Esteem, very large.
11. Love of Approbation, rather large.
12. Cautiousness, very large.
13. Benevolence, large.
14. Veneration, not large.
15. Firmness, very large.
16. Conscientiousness, small.
17. Hope, full.
18. Wonder, large.
19. Ideality, small.
20. Wit, small.
21. Imitation, full.
22. Individuality, large.
23. Form, rather large.
24. Size, rather large.
25. Weight, rather large.
26. Colouring, full.
27. Locality, large.
28. Number, moderate.
29. Order, moderate.
30. Eventuality, large.
31. Time, moderate.
32. Tune, moderate.
33. Language, large.
34. Comparison, rather full.
35. Causality, small.

I shall add a few remarks on the manifestations of his predominant faculties.

Amativeness is marked rather small; and it is a curious feature in a sailor's life, that, notwithstanding the license allowed on board of ship, and the little delicacy displayed in the choice of terms or modes of speech by sailors in general, our captain scarcely ever, in the whole course of the voyage, spoke a word under the impulse of this organ

* The facts stated in this letter are not fictitious.—EDITOR.

which could offend the most delicate ear. In him this refinement was the more remarkable, as, from his rudeness and coarseness of character, it was less expected.

Adhesiveness was rather small, and the only manifestation referable to this faculty was immoderate laughter at his brother having been seized by the press-gang, and carried on board the tender as a deserter, when he himself was the person they wanted. He reckoned this a capital joke, and delighted to tell it.

Combativeness rather large. The fibre was long, but there was little breadth in this region. Its manifestations were not remarkable.

Destructiveness and Self-Esteem were both very large, and the former was used as an instrument for gratifying the thirst for power, arising from a large development of the latter. When Self-Esteem is large, the claim to superiority is generally founded on those qualities which the individual possesses in largest proportion. Thus, when combined with intellect and moral sentiment, the person values himself on intellectual and moral excellence. When the animal propensities predominate, the individual seeks the gratification of his large Self-Esteem by the infliction of misery upon others, as the only means by which he can impress them with a due sense of his power over them. In this way the captain's Self-Esteem and Destructiveness acted together in great harmony, and vented themselves in ebullitions of passion and rage, and a total disregard of the feelings of others. The cloven foot appeared the very day we sailed, although he was anxious to appear all smoothness and civility. Having been hurried in his preparations, the ship presented at this time a scene of turmoil and confusion far surpassing any thing I ever saw, or had an idea of. The deck was covered with every sort of lumber, in the midst of which, pigs, dogs, hens, ducks, and geese, were joining the chorus, and increasing the chaotic din of a crew in the last stage of drunkenness, every member of which attributed all the uproar to the intoxication of the others, and gave loose to his wrath; and the noise caused by the explosion of which was augmented ten-fold by that of some unfortunate biped, or quadruped, who had the misfortune to be trampled upon at every turn. The cabin was covered with trunks, baskets, barrels, cooking utensils, bedding, &c.

so as almost to prevent locomotion. In the midst of this, our steward left us, on account of his brother having been killed by a fall from the yard of an Indiaman alongside, and we got an Irishman in his place, who had never been in the ship till that moment, and who of course could not know the geography of the lockers, &c. even had every thing been in the most perfect order. Two or three visitors remained on board, and the captain wished to shew off a little. Our new steward exerted himself amazingly, but could not avoid a little delay and occasional mistakes, which Solomon himself would have committed in similar circumstances. Our captain, however, finding his Self-Esteem hurt at the want of instant fulfilment of his orders, exhausted his Combativeness and Destructiveness upon poor Pat in curses and blows. The latter, conscious of having exerted himself to the utmost, and done well too, very naturally felt all his better feelings lacerated, waxed a little hot, and threatened to leave us,—for we still lay on the tail of a sand-bank off the harbour. At dark he did leave us, but was pursued by the captain, caught, hauled through the water from the one boat to the other, and again brought on board with desperate threats of punishment in case of farther misconduct. In the course of the voyage the captain told us of many feats in which he had wounded some and killed others; but these we did not believe. He stated, for instance, that he had slain two bravadoes at Oporto, and *unslung* a Yankee's arm with a pistol-ball at New Orleans. He also told us, in a few days after we landed at ——, that he wished to get out of the town one evening after the gates were shut. The sentinel refused. The captain wrenched his musket from him in the most gallant style, threw it into the canal, and pummelled him to a jelly, and upon this was apprehended, lodged in the guard-house all night, where he scratched his breast with a penknife, swore next morning it was a bayonet-wound, and got off as having acted in self-defence. We afterwards ascertained that there was not one word of truth in this story, as he was on board of his own vessel at the time alluded to; but it illustrates his character. On one occasion during the voyage, however, he fired a musket at a Dutch vessel to make her lie-to, that he might get a-head of her.

Constructiveness was large, as were Form, Size, Locality, and Imitation: these give a liking for mechanics. I once questioned him about his tendencies that way. His answer was, "See here what I am working at just now;"—at the same time producing from his pocket a handsome wooden foot, which he had carved with his knife, to form part of a female figure, from which the ship derived its name. I saw some other specimens besides this.

His large Acquisitiveness, and enormous Self-Esteem, gave him the most complete selfishness, which, as Conscientiousness was small, he gratified at any expense within the limits of the law, which, he said, was his only rule. The first specimen was an attempt to make me pay one-third more passage-money than the others, because, as I lived at a distance from a sea-port, he thought I would not be able to detect the imposition. In this, however, he was mistaken. Having a friend who lived in that part of the country, I desired him to make inquiry about the fare, &c., and the captain, not knowing that I was the person for whom he was acting, demanded one-third less from him than from me, so that, on comparing notes, the trick came out. His rapacity was evident in all his conduct, and on one occasion it shewed itself remarkably. The first day of moderate weather, after a succession of storms for upwards of three weeks, while a very high sea was still running, we discovered the wreck of a brig, which had suffered more than ourselves; and, thinking we could descry the crew clinging to the broken masts and rigging, we bore down to relieve them—but all were gone, and the bulwarks and every thing on deck swept clear away. Having a buoyant cargo, the hull still floated, and was turned over now on this side and now on that by every succeeding wave, and altogether presented a spectacle which saddened every mind except that of the captain. He alone was bent upon plunder, and spoke of visiting and breaking up the wreck; but the risk was so great, that none of the crew would go, and he himself was sore afraid. It was the subject of keen regret for many days after: "Had the weather been more moderate, he would have gained so much;" and so forth.

His Secretiveness was full, but not predominant. Had it been larger he would have been ten times worse; but he generally betrayed his purpose before he could execute

it. He was full of contradiction, and did not shew the tact which Secretiveness gives in concocting a story. Self-Esteem was enormous, and his whole life was passed under its influence. I am not aware that he uttered a single word in the whole voyage which had not a near reference to himself or his interest. The love of power was a marked feature in his character, and every means by which he could make his authority be felt was considered lawful. If any of the crew seemed not to feel a sufficiently strong sense of his importance, blows and abuse were bestowed to deepen the impression. If any of the passengers shewed an insensibility to his magnificence, they were assailed with what was intended to be the most cutting satire, with occasional threats of sending them to the forecastle among the crew, as he assured us that every thing was arbitrary on shipboard, and subject to his control. He could command, he said, the speech, *thoughts*, and behaviour of every man on board, sailor or passenger. His satire was generally a failure, as he had the smallest possible portion of wit; and it consisted of pure emanations of Self-Esteem and Destructiveness—the snarl without the bite. If he did succeed in exciting pain, or a feeling of anger, he felt intense delight; it was an involuntary acknowledgment of his power, the more precious that it was generally denied. He could not bear contempt. Coarse and ignorant as he was, he seriously assured us, that he was fit company for the highest and best society in Britain, and that few were his equals in point of knowledge; yet in general he preferred the company of those he counted his inferiors, because his Self-Esteem was gratified by the deference which they paid to him. If he had once uttered an opinion, the plainest and strongest facts failed to make him avow his conviction that it was wrong. He felt exceedingly when we put questions to his mate in his presence. The latter was an intelligent, worthy, and modest man, who generally gave us much more satisfactory answers.

Cautiousness was so very prominent, that I from the first doubted much the truth of a supposed resemblance which he had discovered in himself to Nelson, in never knowing fear. Indeed he soon manifested a very intimate acquaintance with the sentiment, although necessity sometimes forced him to withstand danger. He avowed one day, that

in the only battle he ever was in, he felt a degree of trepidation which was far from pleasant; and he afterwards owned, that a sow having crossed his path in a narrow road, and in a dark night, he beat a retreat rather than venture to pass it. His Wonder, however, aided his Cautiousness on this occasion; for as it was large, it always mystified what he did not perceive clearly. I saw him once, at least, pale and fluttering with a sudden fright. It was at supper-time, only two nights before we met with the wreck. He went on deck to look about him for a moment, and in an instant returned, and with a tremulous voice called up the mates. They hastened up, a good deal alarmed, and were saluted with "Breakers on all sides," not 300 yards off; and at the rate we were moving, five minutes more seemed to him sufficient to seal our doom. The first mate, however, with more self-possession, thought that before we could be *surrounded* with breakers, we must have got into the middle of them some way or other without damage, and therefore we might also get out again in safety; he therefore expressed a suspicion that the foamy appearance was caused by phosphorescent animalcula in the water, and it proved to be so. On coming down again, the captain still looked ghastly pale, and the first words he uttered were, "*I never got such a damnable fright in my life.*" Upon being reminded of his never having felt fear, he would not take with the joke. His whole seamanship was marked by Cautiousness, and to this we were partly indebted for our own safety. Here was an example of the practical effects of a mere feeling when strong in the mind, even with little intellect.

His benevolence, with all his selfishness, was by no means a nonentity. During the stormy weather, when we invalids were all sick, and unable to look after ourselves, he shewed considerable sympathy and kindness of feeling, and gave us many little things to which we had no claim. After we were so far restored as to look to ourselves, he was less scrupulous, but occasionally displayed touches of feeling. Even here, however, he shewed his nature in a curious manner. He had two kinds of wine on board, one much better than the other. The better was reserved for our use, and at table he refused to taste it, and got his Love of Approbation gratified by our praises for his kindness. Our

bottle was set apart to distinguish it, and on several occasions quantities disappeared, nobody knew how. One day, however, on entering the cabin unexpectedly, it was discovered to be the captain himself who absorbed it; and he thus had the manifold luxury of drinking the wine, of being praised for his generosity in not taking it, and of experiencing a kind of pleasant feeling, arising from the gratification of Secretiveness, Acquisitiveness, and Self-Esteem.

His Conscientiousness was small, and the absence of the sentiment was very remarkable. Kill, steal, or destroy, but keep to windward of the law, was his text; and his creed and actions completely corresponded. He took great delight in narrating instances of successful trick and deceit practised upon others.

Firmness, very large, with his Self-Esteem, made him rude, overbearing, and in a high degree obstinate and self-willed. He never could bring himself to yield a disputed point, till a day or two afterwards, when he sometimes would own that he had been wrong.

His Intellect was of a knowing kind. Individuality and Language were large, with small Causality; and it was truly amazing to hear what scraps of Latin and Greek, anecdotes and history, he had collected together in endless confusion, without regard to probability, utility, or common sense.

Satisfied, from the enormous Self-Esteem and Acquisitiveness, with deficient Conscientiousness, that self-interest would ever be a ruling passion in this man's mind, and that it would not be regulated by moral principle, however much it might be smoothed down and masked under the influence of Love of Approbation, Secretiveness, and Cautiousness, which so often give an exterior deportment calculated to hide what is going on within, I was on my guard against it. His Self-Esteem, Firmness, and Destructiveness, gave him an innate love of power, and disposition to tyrannize, which was extremely unpleasant; and he would go almost any length to provoke an acknowledgment of superiority, which, if once accorded, was instantly again demanded. With this view, he often tried to provoke those about him. I knew well the impulses under which he was acting, and therefore was enabled to keep my temper almost invariably; and knowing, that, to a large Self-

Esteem, contempt is the most intolerable of all things, I often looked as if I did not hear his sharpest hits. At first he took this highly amiss; but afterwards, finding his efforts fruitless, and that we would not acknowledge his importance, he became more quiet, social, and forbearing.

One great benefit arising from an acquaintance with the new doctrine is, that it cherishes a spirit of toleration and good-will towards all mankind. Had I met with such a character before I became acquainted with phrenology, I would have had no patience with him; whereas, knowing that nature had endowed him with such propensities, and that unfortunately they had been lost sight of in his education, as in that of most other men, I never suffered myself to be angry or hasty with him, but rather pitied him. It enabled me, also, to see the propriety of never yielding to him in any of his absurd notions, when practically applied, and of leaving him in quiet possession of them while they remained merely matter of opinion. Yielding only increased his obstinacy and importance. He and I soon carried on our intercourse very amicably, from understanding each other. He was extremely fond of drawing a dreadfully long bow, and was in every case the hero of his own story. From observing his large Wonder, Secretiveness, Language, and Individuality, with small Conscientiousness and Causality, I was from the first inclined to receive his stories with liberal abatement, and had no reason to fear offending the feelings of an honest mind by doing so; and in fact he never shewed any uneasiness at the truth of his statements being questioned. Want of space has prevented me from entering into longer details and illustrations; but should the above be of any service, you are at liberty to do with it as you see proper. I am, &c.

MASTER JAMES HUBARD.*

The subject of this notice is a native of Shropshire, aged 14. He is now well known in Edinburgh for the talent which shall afterwards be described; but in January 1824, and before coming hither, he had exhibited publicly in Glasgow, and had excited some controversy between the phreno-

* By William Ritchie.—Vol. i. No. 3. p. 436.

logists and anti-phrenologists of that city. Mr W. Bewick was in Glasgow at the same time, exhibiting his copy of Mr Haydon's *Lazarus*, and some other historical pictures; and being aware that his friend Mr W. Ritchie (3. Hill Square, Edinburgh), was a Phrenologist, he suggested a plan by which, on Master Hubard's going to Edinburgh, the points in dispute might be put to rest. Accordingly, in February, and before Master Hubard had exhibited in Edinburgh, or was at all known here, Mr James Edmonston of Prince's Street, at Mr Bewick's request, waited on Mr Ritchie, to whom he was unknown, and, without any previous notice, introduced himself and the boy, by a letter from Mr Bewick, which simply mentioned, that a boy would be introduced to him, who was possessed of a *peculiar* talent, and who had excited controversy in Glasgow, as to whether the development of his brain corresponded with the manifestations of his faculties. Mr Ritchie stated, that he had not cultivated the science so arduously as to be able to speak with perfect confidence respecting some of the minute organs; but that he would examine the boy's head, and mention frankly what it indicated. Mr Ritchie then stated, without hesitation, what, according to the development, were the leading talents and propensities of the boy before him; observing that he was gifted especially with those organs which enable one to distinguish himself as an artist. When he had given this opinion, Mr Edmonston expressed a wish, on the part of his Glasgow friends, that the boy, while unknown, should be seen also by Mr G. Combe; and the whole party, without separating, proceeded forthwith to this gentleman's house. *There* the party remained together in the room they were first shewn into, until Mr Combe was brought to them; and, without any other intimation than that there was a wish to *test Phrenology* by an examination by Phrenologists of the boy's head, and an opinion as to his talents, Mr Combe proceeded to ascertain the development and dictate an opinion. This was all done and certified in presence of Mr Edmonston, and before any of the party left the room. Mr Ritchie, in his examination, did not measure the head, or note down the development of the several organs; but Mr Edmonston certified that the account of talents and character given by him virtually corresponded exactly with what was dictated separately by Mr Combe, and which was as follows:—

From Occipital spine to Individuality, . . .	$7\frac{1}{8}$ inches.
—— Concentrativeness to Comparison, . . .	$7\frac{3}{10}$
—— hollow of the ear to Occipital spine . .	$3\frac{7}{8}$
—— do. do. to Individuality, . . .	$4\frac{6}{8}$
—— do. do. to Firmness, . . .	$5\frac{1}{2}$
—— Destructiveness to Destructiveness, . .	$5\frac{7}{8}$
—— Secretiveness to Secretiveness, . . .	$5\frac{9}{10}$
—— Cautiousness to Cautiousness, . . .	$5\frac{1}{2}$
—— Constructiveness to Constructiveness, . .	$4\frac{4}{8}$
—— Ideality to Ideality, ...	5
—— *Meatus auditorius* to Benevolence, . .	$5\frac{5}{8}$

1. Amativeness, large.
2. Philoprogenitiveness, large.
3. Concentrativeness, large.
4. Adhesiveness, large.
5. Combativeness, large.
6. Destructiveness, large.
7. Secretiveness, very large.
8. Acquisitiveness, full.
9. Constructiveness, rather large.
10. Self-Esteem, rather large.
11. Love of Approbation, large.
12. Cautiousness, full.
13. Benevolence, rather large.
14. Veneration, rather large.
15. Firmness, large.
16. Conscientiousness, full.
17. Hope, moderate.
18. Wonder, full.
19. Ideality, full.
20. Wit, rather full.
21. Imitation, large, more on one side than the other.
22. Individuality, } decidedly large.
23. Form, }
24. Size, very large.
25. Weight, not ascertained.
26. Colouring, large.
27. Locality, rather large.
28. Number, rather full.
29. Order, full.
30. Eventuality, large.
31. Time, rather full.
32. Tune, rather full.
33. Language, full.
34. Comparison, large.
35. Causality, full.

" The head is large, and the organs of the propensities are considerably developed, which indicate power. The organs of the faculties which give the social affections are large; so that, while there will be the elements of a good hater or a formidable enemy, there will be also the constituent feelings of a warm and excellent friend. The combination of Concentrativeness, Love of Approbation, Conscientiousness, and Intellect generally, will give a philosophic character to the mind, and fit the individual for comprehending and applying principle in all his undertakings. The distinguishing characteristic, however, is his talent for art. The combination of Secretiveness, Form, Size, and Imitation, with Individuality and Comparison, should give him the tact of combining expression of character with great truth and accuracy in the details of his work. At his time of life it is probable that the talent will have shewn

itself in cutting or clipping figures of animals, men, &c. Colouring is also fully developed, and he might succeed as a painter; but his power of colouring will not be equal to his power of drawing and giving expression."

Many of our readers have probably seen Master Hubard; as he has practised his art, in the way of public exhibition, in the principal cities of England and Scotland, and is now, we believe, in Dublin. He clips in paper profile-likenesses of those who visit his gallery, at the charges of one shilling each for half-lengths, and five shillings for whole-lengths; and the walls of his exhibition-room are hung round with many beautiful specimens of his skill. "The Western Luminary" gives the following account of him and of some of his productions:—"Little Hubard's talents were discovered at nearly six years of age. He had been with his parents to the village-church, and was observed to be remarkably attentive during the service. They were pleased at such an early appearance of devotion, and, wishing to see it continued, made no remarks to him respecting it. Great, however, was their surprise shortly after his return home, to observe their *pious boy* cutting pictures from a sheet of blank paper; and how much was that surprise increased, when they saw the most striking likenesses of their minister, his pulpit, and his precentor.

"Nature had so strongly spoken out in this instance, that she could not be mistaken. His talent was encouraged, until he arrived at that acmé of perfection in which we now behold him, and which we shall endeavour to give a more vivid and detailed view of, by describing the various figures in the Exhibition-Room.

"*The Duke of York.*—One of the best likenesses of this princely personage we have ever seen: he is beautifully bronzed.

"*Going to the Races.*—A very long picture, with some hundreds of figures. One or two of the sketches conceived with great fidelity, and executed with great effect. A dandizette trying to save her bonnet, and a dandy thrown from his balance, very picturesque. A horse stopping to drink, and being kindly inclined, giving his rider a drink too, *sans ceremonie*, happily imagined. Bear-dancers, and monkey on bruin's back, highly ludicrous.

"*Children.*—Both very beautiful. The child putting a

flower into a basket, simple and natural. The girl leading a fawn with a ribband, most playful. The fawn is full of fun, the child of innocence.

"*The Glasgow Catholic Chapel.*—This is the most astonishing performance of the whole. Without the least shading, save the white upon the black, it presents the most beautiful perspective, the most exquisite symmetry, and the most faithful outline of that fine specimen of modern architecture we ever saw—we could gaze an hour, and yet not be satiated."

To convey an idea of Master Hubard's rapidity and dexterity of workmanship, we select the following description from the letter of a correspondent:—"I went to Glasgow one day ignorant of this boy's existence. It happened that I had two or three hours to wait there for a gentleman, who was to return with me to ——, and I was really at a loss how to occupy the time. Accident carried me to Master Hubard's exhibition-room, and I assure you that, in my life, I never was so much surprised and pleased with any *exhibition;* never at least with one of that sort. The boy's talent is, in my humble opinion, truly astonishing. To view it to advantage you should, as I did, see him (to use a happy enough expression of a newspaper-writer) despatch 300 victims at an average of 20 seconds each. It was a Saturday, and said to be his last day. Men, women, and children of all sorts and sizes passed in review before the little conjurer, and were committed to paper, with this extraordinary celerity. I took my turn, and was scarcely seated on the stool when I was to be displaced by another. Hubard asked me, do you choose to have *two* or *one*, sir? (he cuts the paper double), those who took the two copies paying an additional sixpence. Now, as to the accuracy of these outlines, I watched him attentively for at least an hour, comparing a multitude of his copies with the originals, and it struck me that many of them were very faithful and spirited likenesses. With others (my own among the number) I was not so well satisfied; but I ascribed their defects to no deficiency of talent in the artist, but to the ridiculous rapidity with which he worked. I resolved, therefore, to try him again in my own person, at a full-length (the others were busts), if he would agree to do it. 'Most willingly, sir, when the crowd is gone,' was his answer.

When the crowd did go, it was threatening to get dark, and no time was to be lost for *my execution.* I stood on the floor in a fixed and *condemned* attitude. The day being cold, I happened to wear a dress lined and edged with fur, cut in the German or Polish fashion—such a coat, in short, as I should *prefer* for a portrait, though certainly I had not put it on for Master Hubard; but being on, I considered that the unusual shape, the folds, the collar, and edging of fur, presented a very fair trial of his skill. Before letting him begin I took out of my pocket the busts he had done of me an hour before, and said, 'Be so good, Master Hubard, as to look at these, and see if you are yourself perfectly satisfied with the likeness so far as it goes.' He looked at them for a moment, and replied, 'No, sir, I am *not;* I will make the next much better. I have made the upper-lip too prominent,' &c. &c. Well, in five minutes exactly, my execution was over; the sentence of pillory and dissection with scissors being completed.

"The opinion of every one to whom I shewed it was, that a more spirited and faithful outline in profile could not possibly be made. One person at—— said, 'He has caught your very *air.*' He had altered the position, and the way in which I held my hat at the moment; which shewed great readiness, as he did not desire me to change my position."

We have heard it observed, that the present exceeded in extravagance all the cases of the Phrenologists; for that here they had found an organ for paper-clipping! This remark is so truly puerile, that we should not have noticed it, except to say that the talent is by no means rare, in an inferior degree, and that, in the works on Phrenology it is repeatedly mentioned, and ascribed to the faculties which predominate in Master Hubard. We have met with several instances of it in Edinburgh, and one, in particular, was adverted to in an article on Constructiveness in our last Number. On another occasion, we happened to remark a great development of Constructiveness, Form, and Imitation, in the head of a child of seven years, and asked if he was not fond of drawing, or clipping or cutting figures. His father produced a portfolio of his productions; among which was a regiment of Highlanders, then in town, cut in all the varieties of costume, from the drum-boy to the colonel on horseback. The great source of Hubard's ex-

cellence is the peculiar combination of Form, Size, Individuality, Constructiveness, Secretiveness, Ideality, and Imitation, all well developed. We have seen many instances in which one or two of these organs were larger; but have never met with one in which they were *all so large*. The case confirms strikingly the doctrine long since laid down in the systems of Phrenology, that Secretiveness and Imitation give expression in the fine arts. It is easy to account for the assertions of the opponents in regard to this boy. They look for the "bump," to use their own expression, although they have been told very frequently that it is the *size* of an organ, in length and breadth, from the *medulla oblongata*, which indicates the power of the faculty, and that where several contiguous organs are all large, there can be no projecting eminences. Accordingly, in Hubard, the superciliary ridge projects in an unusual degree beyond the cheek-bones, and this indicates a great development of the whole organs there situated; but not one of them presents the appearance of a swell. In the next place, Benevolence is large, and Imitation is nearly equal with it, and no bump is found there; but in those in whom Benevolence is large and Imitation small, a sloping surface is felt in the situation of the latter organ, instead of a full and flat configuration as in Hubard.

COMPARATIVE INFLUENCE OF NATURE AND CIRCUMSTANCES IN THE FORMATION OF HUMAN CHARACTER.*

Mr Owen has promulgated a doctrine which he denominates "The Science of the Influence of Circumstances in forming the Human Character;" and to arrive at an enlightened judgment of its merits, it is necessary to take a comprehensive view of the natural constitution of the human mind, and of the modifications of which it is susceptible.† Before the discovery of phrenology, no adequate

* By George Combe.—Vol. i. No. 2, p. 218.

† It is proper to mention, that we submitted the following observations to a zealous and able advocate of Mr Owen's views, and that he has favoured us with his corrections and remarks, which we print

means existed of attaining sound and definite ideas on the former point, and until such information is possessed, all speculations concerning the latter must necessarily be defective; because, without knowledge of the natural qualities of the subject which we desire to modify, we are not in a condition to judge of the means best fitted to attain our end, or to discriminate between results attributable to natural constitution, and others springing from adventitious causes. Mr Owen, like many of his predecessors, proceeds to speculate on the modifying power of circumstances, without previously ascertaining the primitive attributes of the subject to be modified—at least without *philosophically* doing so; for his table of the original powers of the human mind does not correspond with that contained in any admitted system of mental philosophy, and he offers no evidence,* on his own part, in support of its title to universal acceptance. This is a fundamental error, the effects of which may be easily explained. We, for example, humbly believe, that a natural propensity of Acquisitiveness exists in the human mind, and Mr Owen does not admit such a feeling.† We are constrained to rank a tendency to destroy, and another to combat, among the primitive powers, while Mr Owen conceives these propensities to be adventitious. We hold Secretiveness to be natural, while he maintains the disposition to conceal to be the result of irrational treatment in youth. Now, suppose, what is the truth, that both Owenites and phrenologists ardently desire to conduct mankind to the greatest possible happiness of which their nature is susceptible, how different will be the means that will appear adequate, according to the views entertained on the above points; while, at the same time, upon the judicious choice and employment of the means, will depend altogether the probabilities of success!

The primitive constitution of the mind is not a point to

in the form of notes, signed O. To do him full justice, we offer no commentary on his statements, but leave the reader to decide, according to the dictates of his own judgment, after considering both sides of the question.

* Except the internal consciousness which he supposes to exist in each individual.—O.

† No innate feeling of Acquisitiveness, farther than is really necessary for supplying, in the best manner, all our natural wants and rational desires.—O.

be taken for granted, or passed over as of no importance; but ought to form a fundamental element in all our reasonings, and in all our schemes, for the improvement of the race. If the phrenologists are well-founded in believing that Combativeness, Destructiveness, Acquisitiveness, and Secretiveness exist, it will be impossible, by the influence of circumstances, to eradicate them from the mind, and no scheme for the melioration of the species will succeed which does not admit their existence, and provide either for their gratification or adequate restraint. If we proceed on the notion that they are not natural, we shall be led to treat them with neglect, till they burst forth and overwhelm all our schemes. If, on the other hand, we allow their existence, but expect completely to subdue them, then our system must embrace means for inducing men to practise self-denial and restraint, and in this respect differ widely from institutions framed on the principles of unlimited indulgence.

Mr Owen's leading principle is, "that the character of man is, without a single exception, always formed for him; that it may be, and is chiefly, created by his predecessors; that they give him, or may give him, his *ideas* and *habits*, which are the POWERS that *govern* and *direct* his conduct." —(*Essays on the Formation of Character*, p. 83.) According to phrenology, the origin of human character is different. Nature has implanted certain animal propensities, moral sentiments, and knowing and reflecting faculties in the mind, and connected each with a particular organ. Each is susceptible of *spontaneous* activity, and it may be called into action also by *external excitement*. Desires and aversions take their origin from the activity of the propensities and sentiments, and intellectual ideas from that of the knowing and reflecting powers. Thus, if in any individual the organ of Acquisitiveness is adequately developed, it may become spontaneously active, and the faculty attached to it will then generate desires for wealth, or other objects capable of accumulation. The sentiment of Ideality may become active in a similar way, and then the mind will be spontaneously filled with brilliant and magnificent emotions; or if Combativeness and Destructiveness be excited, the mind may be inspired with a passion for war.

According to phrenology, then, *ideas* and *habits* are not

the "POWERS which govern and direct the conduct;" their influence is this:—If a boy possess a strong natural Acquisitiveness, and his father be a merchant, and inculcate on him the advantages of wealth, the "ideas and habits" thus communicated may direct the propensity to seek indulgence in commercial pursuits. If the youth, on the other hand, possess the same Acquisitiveness, with little Self-Esteem, and great Love of Approbation, and live among philosophers, who prize highly collections in natural history, the "ideas" he receives from them may turn his Acquisitiveness towards the formation of a museum. If in another child Combativeness were very powerful, and he were placed within the influence of soldiers, he might be led by the "ideas" received from them to indulge in the profession of arms; or, on the other hand, if he heard only of the contentions of the bar, he might, his other faculties permitting, be induced, by this stock of ideas, to seek its gratification in forensic disputation. Mr Owen, however, appears to imagine, that by the simple communication of ideas,* the fathers could, in any of these cases, have created a desire in the children to be merchants, soldiers, or lawyers, indifferently—a notion contradicted by every day's experience of life. He, indeed, is not so inconsistent as to affirm, that a boy *naturally* combative may be made acquisitive, or *vice versa;* for he denies that such natural tendencies exist. Viewing the mind, however, as a very plastic instrument, he conceives it quite possible to make *any* boy a soldier, lawyer, or divine, by merely communicating to him habits and ideas. In D'Israeli's Curiosities of Literature, there is an anecdote of the "Fairfaxes," which forcibly illustrates how widely such views differ from actual nature. "The old Lord Thomas Fairfax one day found the Archbishop (of York, in James the First's reign) very melancholy, and inquired the reason of his Grace's pensiveness. 'My Lord,' said the Archbishop, 'I have great reason of sorrow with respect to my sons, one of whom has wit and no grace, another grace but no wit.' 'Your case,'

* By sound ideas, and good habits, the fathers might have so formed the judgment and inclinations of their sons, that these habits and ideas would have inclined them to prefer temperance, kindness, and industry in some useful employment, to the vices which are opposed to these virtues.—O.

8093

replied Lord Fairfax, 'is not singular. I am also sadly disappointed in my sons. One I sent into the Netherlands to train him up a soldier, and he makes a tolerable country justice, but a mere coward at fighting.* My next I sent to Cambridge, and he proves a good lawyer, but a mere dunce at divinity ;† and my youngest I sent to the Inns of Court, and he is good at divinity, but nobody at law.' "‡

According to phrenological principles, then, the character of an individual is the result of his natural endowment of propensities, sentiments, and intellectual faculties, modified by education, and all external influences which have operated upon them. This, we admit, is also Mr Owen's doctrine in *words ;* for in his *first* letter explanatory of his views, he says, "that human nature, like each distinct species of animal nature, is always composed of the same general propensities, faculties, and qualities, but that these differ in degree and combination, in every individual of the human race." But, in the first place, this is at variance with the doctrine above quoted from his Essays ; and, secondly, as already observed, he does not think it necessary to ascertain what these primitive propensities are, in which he admits individuals to differ—and in his general argument he proceeds as if they had no existence, or at least as if they were *entirely* plastic to his will.

As, however, we admit the influence of modifying causes, it is proper to explain to what extent we conceive them to operate. Our doctrine on this point may be embodied in three propositions, which appear so self-evident, that we forbear offering any argument in support of them. *First,* We cannot *eradicate* any propensity, sentiment, or intellectual faculty implanted by nature. *Secondly,* We cannot essentially *change the character* of any natural feeling,§ so as to

* This disposition would spring from large Cautiousness and Conscientiousness, with a deficiency of Combativeness, and probably of Firmness and Destructiveness.

† This indicates Veneration deficient; and probably Combativeness, which fits for disputation, along with intellect fully developed.

‡ This character would result from Veneration, Hope, and Benevolence largely developed, and probably Combativeness and Firmness deficient.

§ Unless changing the feeling of Veneration from the governing power of the universe, to what in the East is called "Devil-Worship," be changing its character.—O.

convert Acquisitiveness into Benevolence, or Combativeness into Veneration. And, *thirdly*, our efforts are limited to increasing or diminishing the vigour and activity of the different faculties, restraining them from improper manifestations, and directing them to legitimate and beneficial indulgence.

Phrenology shews that man possesses animal propensities, moral sentiments, and intellect; and that, *cæteris paribus*, these powers act with a degree of energy corresponding to the size of their respective organs. To use an illustration brought forward by the Rev. Mr Singer, in his reply to Mr Owen at Dublin, on March 18. 1823:—"Adam had two sons—one was *Cain*, and the other *Abel*." The phrenologist would account for the difference of character between these two individuals, by supposing Abel to have possessed a large development of the organs of the moral sentiments, and a small or moderate endowment of the organs of the lower propensities; and Cain exactly the reverse. Both being exposed to the same external modifying causes, Abel would be led, by the spontaneous activity of his faculties, to religious and peaceful exercises; Cain, by the impulse of his animal feelings, to jealousy, hatred, revenge; and the catastrophe of the murder would ensue as a natural result. We use this as an illustration merely of our position, that moral evil springs from abuses of the animal propensities of human nature, when not regulated by moral sentiment and directed by intellect. Observation shews that some individuals are born with so great a preponderance of the first over the two latter classes, that they are *constitutionally* prone to immoral and prejudicial conduct.

According to Mr Owen, however, moral evil seems to be without a cause. "Each human being," says he, "comes into the world a *passive* compound, and, in some respects, unlike every other individual of his species." If the first human being was a *passive* compound at creation, when did he or the race become active? If each child is at birth a passive compound, why do parents experience such great difficulties in modifying their dispositions? In short, we are carried back to the question which we represented as lying at the base of the argument, What is *human nature*

IN ITSELF? Mr Owen represents it as a passive;* we, on the other hand, hold it to be an EMINENTLY ACTIVE compound, susceptible at the same time of some modification from external causes—and how different will our methods for improving it be, according as we conscientiously hold one or other of these views! Mr Owen, we know, will tell us, that an infant an hour old is NOT *active*, and we grant him this position; but our doctrine is, that at this age the mind contains principles which time alone will render active, and which cannot be eradicated, changed, or prevented from unfolding themselves, except by the death or physical restraint of the being. He, on the other hand, to be consistent, must deny the existence of all principles ever tending to action; because the moment he admits *a single active* disposition, his whole fabric, reared on the basis of man's *passive* nature, falls to the ground, and he must himself perceive the necessity of inquiring into the character and tendency of the active powers, before forming schemes for directing human conduct.

Vehement disputes have been maintained by philosophers about the influence of nature and education, as forming the character of individuals; one class maintaining that nature does all, and another that education, in this respect, is omnipotent. Mr Owen, although in words he disclaims alliance with the latter, appears to us, if he were consistent with himself, to belong to it. The phrenologist steers a middle course between the two; man, as revealed to him by his science, is endowed with active powers, which in *some* individuals, such as Fairfax's sons, are so energetic as to form the leading features of the characters through life, but which in others are susceptible of control and direction, so as to render them liable to receive important modifications from without.

* A passive compound, which can move in no direction till it be acted upon; that is, till a thought or idea come into the mind; which thought or idea comes into his mind independently of any power which man can command, and leads him along as decidedly as if he were drawn by force, and—boasting of his freedom—he is thus led, as it were, "by the nose," from the cradle to the grave.—O.

OBSERVATIONS ON SPECTRAL ILLUSIONS,

AND OTHER ILLUSIVE PERCEPTIONS OF THE KNOWING ORGANS WHEN IN MORBID EXCITEMENT; ILLUSTRATED BY A RECENT CASE.*

In vol. i. of the Phrenological Journal, p. 551, a phrenological explanation is given of the phenomenon of Spectral Illusions, to which I beg leave to refer the reader. Drs Gall and Spurzheim have observed, that when the organ of Wonder is in great development and high excitement, there is a tendency to see visions, or to experience Spectral Illusions. In the Journal, a theory is suggested, that this sentiment, when in a state of extreme exaltation, may stimulate the Knowing and Reflecting Faculties to conceive objects fitted to gratify it; and that spectres, apparitions, spirits, &c. are the kind of ideas suited to please an inordinate Wonder. I wish particularly to remark, that the organ of Wonder is here considered as not sufficient *per se* to produce the illusions of spectres, but that the co-operation of the Knowing Organs is held as also requisite. This view will be greatly strengthened by a new and important case, which forms the chief object of the present communication. To understand it distinctly, an acquaintance is necessary not only with the functions of the different Knowing Faculties, but with the situations of their organs. The following brief sketch may be useful in recalling them to the recollection of the reader:—

1. Individuality is situated between the eyebrows, immediately over the root of the nose. The faculty perceives material *existences*, without perceiving their *qualities*.

2. Form is situated between the eyes, on the two sides of the *crista galli*. The faculty distinguishes the quality of form.

3. Size is situated in the inclined curve which connects the eyebrows with the root of the nose, and the faculty gives the perception of extension. The organs of Individuality, Form, and Size are in juxta-position.

* By James Simpson.—Vol. ii. No. 6, p. 290. Read before the Phrenological Society on 3d February 1825.

4. Weight, as it has hitherto been called, lies next to and outward from Size, and the faculty appears to me to produce the perception of gravitation, or more generally force, and to enable all animals to preserve equilibrium and regulate their movements.

5. Colouring is situated next to Weight in the superciliary ridge or eyebrow, and its faculty gives the perception of the quality of colour.

6. Locality, or the faculty which judges of the relative position of *fixed* objects, has its organ in the forehead immediately above Size.

7. Order is situated outward of Colouring, close to but within the angle of the frontal bone, or near the outer extremity of the eyebrows. The faculty takes cognizance of arrangement, is pleased with regularity, and displeased with confusion in physical objects.

8. Number has its organ at the very external extremity of the eyebrow, and extending a little downward after passing the angle of the frontal bone. Its higher function is calculation, but its simple is probably the perception of number as distinguished from unity.

9. Time is situated immediately above Colouring. It is marked as only probable in the books, and the faculty gives the perception of intervals of duration. Recent facts appear to render it certain.

10. Tune is situated in the immediate neighbourhood of, but distinct from Time, and appears in its more moderate endowment to produce the power of distinguishing different sounds, without regard to their harmonious or even melodious relations. When highly developed, melody and harmony are perceived.

11. Language is situated immediately above the middle of the supra-orbitary bone, or above the middle of the eyeball. It produces the power of using artificial signs for thoughts.

All these organs are placed in one region of the forehead, forming a group; and that they, as well as the organ of Wonder, were excited in the recorded cases of Spectral Illusions, appears obvious from the description given of the apparitions themselves. Thus Nicolai, the Berlin bookseller, saw the *form* as of a deceased person within eight steps of him, *vast numbers* of human and other forms, equally

in the day and night, crowds of both sexes, people on horseback, birds and dogs, of natural size, and distinct as if alive, of natural colour, but paler than reality. He then *began to hear them talk.* On being blooded with leeches, the room was crowded with spectres; in a few hours their *colour* began to fade, and in a few more they were white. They dissolved in air, but *fragments* of them were visible for some time. Dr Alderson of Hull furnishes the two next cases. Mr R. left his wife and family in America, but saw them and conversed with them in this country; saw *trains* of living and dead persons; in *a bright brass lock* again saw his transatlantic friends, and always in that lock; had violent headach. A pothouse-keeper in Hull saw a soldier in his cellar, whom he endeavoured to seize, but found an illusion; attempted to take up oysters from the ground, which were equally unreal; saw *crowds* of the living and dead; scarcely knew real from spectral customers; suffered repeated flogging from a waggoner with a whip, which was an illusion. In the second volume of the Phrenological Journal* is given the case of a man in the west of Scotland with a large organ of Wonder, who sees inanimate things and persons in visions; had a *spotted carpet* for a long time before his eyes, a funeral, a log of wood on wheels. His son has the same tendency; he followed a beggar, who glided and vanished into a wall. All these perceptions are clearly referable to the Knowing Organs.

The positions and functions of the cerebral organs have been discovered and established by comparing the power of manifesting the particular mental qualities with the size of the various parts of the brain; but some of them have received additional support from the phenomena of disease. Thus, in the case recorded by Mr Hood in the Phrenological Transactions, loss of the memory of words was preceded by pain in that region of the head where the organ of Language is situated; pain has been experienced in the *cerebellum* in concomitance with over-excitement of the peculiar function connected with it; and in the Phrenological Journal† it is mentioned, that a gentleman in London, "when asked whether he experienced any sensation in the head when afflicted with visions? pointed to the

* Page 111. † Vol. i. p. 554.

spot on each side where the organ of Wonder is situated, and said that he felt an uneasy sensation there." Concomitance of pain in the precise seats of the organs, with disorder of their functions, forms a striking feature in the following case, to which I may proceed :—

Miss S. L., a young lady under twenty years of age, of good family, well educated, free from any superstitious fears, and in perfect general health of body and soundness of mind, has, nevertheless, been for some years occasionally troubled, both in the night and in the day, with visions of persons and inanimate objects, in almost all the modes and forms which we have already related. She was early subject to such illusions occasionally, and the first she remembers was that of a *carpet* spread out in the air, which descended near her and vanished away.

After an interval of some years, she began to see human figures in her room as she lay wide awake in bed, even in the daylight of the morning. These figures were *whitish*, or rather *grey* and *transparent* like *cobweb*, and generally above the *size* of life. At this time she had acute headachs, very singularly confined to one small spot of the head; on being asked to point out the spot, the utmost care being taken not to lead her to the answer, our readers may judge of our feelings as phrenologists, when she touched with her forefinger and thumb *each side of the root of the nose, the commencement of the eyebrows, and the spot immediately over the top of the nose, the ascertained seats of the organs of Form, Size, and Individuality!* Here, particularly on each side of the root of the nose, she said the sensation could only be compared to that of running sharp knives into the part. The pain increased when she held her head down, and was much relieved by holding her face upwards.* Miss S. L. on being asked if the pain was confined to that spot, answered, that some time afterwards *the pain extended to right and left along the eyebrows, and a little above them, and completely round the eyes, which felt often as if they would have burst from their sockets.* When this happened, her visions were varied precisely as the phrenologist would have anticipated, and she detailed the progress without a single leading question.

* Quere,—Does not this look like a pressure of blood on that region of the brain?

Weight, Colouring, Order, Number, Locality, all became affected; and let us observe what happened. The whitish or cobweb spectres assumed the natural *colour* of the objects, but they continued often to present themselves, though not always, above the *size* of life. She saw a beggar one day out of doors, natural in size and colour, who vanished as she came up to the spot. Colouring, being over-excited, began to occasion its specific and fantastical illusions. Bright spots, like stars on a black ground, filled the room in the dark, and even in daylight; and sudden and sometimes gradual illumination of the room during the night often took place, so that the furniture in it became visible. Innumerable balls of fire seemed one day to pour like a torrent out of one of the rooms of the house down the staircase. On one occasion, the pain between the eyes, and along the lower ridge of the brow, struck her suddenly with great violence,—when, *instantly*, the room filled with stars and bright spots. On attempting, on that occasion, to go to bed, she said she was conscious of an *inability to balance herself, as if she had been tipsy;* and she fell, having made repeated efforts to seize the bedpost, which, in the most unaccountable manner, eluded her grasp, *by shifting its place*, and also by presenting her with *a number* of bedposts instead of one. If the organ of Weight, situated between Size and Colouring, be the organ of the instinct to preserve, and power of preserving equilibrium, it must be the necessary consequence of the derangement of that organ to overset the balance of the person. Over-excited Number, we should expect to produce multiplication of objects, and the first experience she had of this illusion, was the multiplication of the bedposts, and subsequently of any inanimate object she looked at—that object being in itself real and single;—a book, a footstool, a work-box, would increase to twenty, or fifty, sometimes without *order* or arrangement, and at other times piled regularly one above another. Such objects deluded her in another way, by increasing in *size*, as she looked at them, to the most amazing excess,—again resuming their natural size,—less than which they never seemed to become,—and again swelling out. Locality, over-excited, gave her the illusion of objects, which she had been accustomed to regard as fixed, being out of their places; and she thinks, *but is not sure*,

that on one occasion a door and window in one apartment seemed to have changed places—but, as she added, she might have been deceived by a mirror. This qualification gave us the more confidence in her accuracy, when, as she did with regard to all her other illusions, she spoke more positively. She had not hitherto observed a great and painful confusion in the visions which visited her, so as to entitle us to infer the derangement of Order. Individuality, Form, Size, Weight, Colouring, Locality, and Number, only, seemed hitherto affected.

For nearly two years Miss S. L. was free from her frontal headachs, and—mark the coincidence—untroubled by visions or any other illusive perceptions. Some months ago, however, all her distressing symptoms returned in great aggravation, when she was conscious of a want of health.* The pain was more acute than before along the frontal bone, and round and in the eyeballs; and all the organs there situated recommenced their game of illusion. Single figures of absent and deceased friends were terribly real to her, both in the day and the night, sometimes *cobweb*, but generally coloured. She sometimes saw friends on the street, who proved phantoms when she approached to speak to them; and instances occurred where, from not having thus satisfied herself of the illusion, she affirmed to such friends, that she had seen them in certain places, at certain times, when they proved to her the clearest *alibi*. The *confusion* of her spectral forms now distressed her. (Order affected.) The oppression and perplexity was intolerable when figures presented themselves before her in inextricable disorder, and still more when they changed—as with Nicolai—from whole figures to parts of figures, faces, and half-faces, and limbs—sometimes of inordinate size and dreadful deformity. One instance of illusive disorder which she mentioned is curious, and has the farther effect of exhibiting what cannot be put in terms except those of the derangement of the just perception of gravitation or equilibrium (Weight.) One night, as she sat in her bedroom, and was about to go to bed, a *stream* of spectres, persons faces, and limbs, in the most shocking confusion, seemed to her to pour into her room from the window, in

* Constitutional irregularity would, it is very probable, explain the whole disorder.—EDITOR.

the manner of a cascade! Although the cascade continued apparently in rapid descending motion, there was no accumulation of figures in the room, the supply unaccountably vanishing after having formed the cascade. Colossal figures are her frequent visitors. (Size.)

Real but inanimate objects have assumed to her the form of animals; and she has often attempted to lift articles from the ground, which, like the oysters in the pot-house cellar, eluded her grasp.

More recently she has experienced a great aggravation of her alarms; for, like Nicolai, she *began* to hear her spectral visitors speak! With Mr R. of Hull the spectres always spoke. At first her crowds kept up a buzzing and indescribable *gibbering*, and occasionally joined in a loud and terribly disagreeable *laugh*, which she could only impute to fiends. These unwelcome sounds were generally followed by a rapid and always alarming advance of the figures, which often on those occasions presented very large and fearful faces, with insufferable glaring eyes close to her own. All self-possession then failed her, and the cold sweat of terror stood on her brow. Her single figures of the deceased and absent then began to gibber, and soon more distinctly to address her; but terror has hitherto prevented her from understanding what they said.*

More lately still, she has seen distinct visions in *bright brass locks*, as we mentioned above was the singular experience of the American gentleman, Mr R.

She went, not very wisely, to see that banquet of demonology, the Freischutz, and of course, for some time afterwards, the dramatis personæ of that edifying piece, not excepting his satanic majesty in person, were her nightly visitors. Some particular figures are persevering in their visits to her. A Moor, with a turban, frequently looks over her shoulder, very impertinently, when she uses a mirror.†

Of the other illusive perceptions of Miss S. L., we may mention *the sensation of being lifted up*, and of *sinking*

* We may here mention, that the phrenological explanation of her distressing affection, which were given Miss S. L., had the happy effect of affording her much more composure when visited by her phantoms than she thought possible.

† Looking into a mirror for a view of her destined husband, in Hallow-e'en gambols, has, it is well known, terrified many a simple Scottish maid with a phantom of her own creating.

down and *falling forward*, with the puzzling perception of objects off their perpendicular; for example, *the room, floor and all, sloping to one side.* (Weight.)

Colours in her work, or otherwise, long looked at, are slow to quit her sight. She has noises in her head, and a sensation of heat all over it; and, last of all, when asked if she ever experienced acute pain elsewhere about the head than in the lower range of the forehead, she answered that three several times she was suddenly affected with such excruciating throbbing pain on the top of the head, that she had almost fainted; and when asked to put her finger on the spot, *she put the points of each forefinger precisely on the organ of Wonder on each side of the coronal surface!*—the same points in which the gentleman in London, who was troubled with visions, was affected with pain. The organ of Wonder is large in Miss S. L. as it was in that gentleman.

I had written thus far, when I received a communication from our fair sufferer of a more recent experience of hers, of a yet more pointed kind. She has lately observed, that while objects were most fantastically enlarging and diminishing to her deluded sense, the pain has struck deeply into the minute point where the organ of Size is situated, *and there alone.* This happened lately while a pillar magnified and shrunk alternately as she gazed on it. This illusion ceased, and another came on her cheated view. Two demons of the Freischutz, decently dressed in black in the original, put on for her the most brilliant scarlet, while acute pain was felt in the middle point of both eyebrows (Colouring), *and there alone.*

Our readers must have of themselves observed, as we advanced with this instructive case, how curiously the old-established phenomena of ghosts are *seriatim* explained by it. White or grey ghosts—the grey bodach of M'Ivor in Waverley,—result from excited Form, with quiescent Colouring, the transparent cobweb effect being colourless. Pale spectres and shadowy yet coloured forms, are the effect of partially excited Colouring. Tall ghosts and dwarf goblins are the illusions of over-excited Size. Creusa appeared to Æneas, colossal in her size.—

> Infelix simulacrum atque ipsius umbra Creusæ
> Visa mihi ante oculos et nota *major imago.*

The ghosts of Ossian are often colossal. Gibbering and speaking ghosts, with an unearthly confusion of tongues and fiend-like peals of laughter, as if the demons revelled, are illusions which many have experienced. How these illusive voices arise which, without phantoms, frequently afflict nervous patients (and, as Miss S. L. assured us, are very often heard by her, in whisperings close to her ear, of one and sometimes many voices), we have not facts satisfactorily to explain. If there is, as by all analogy we may conclude there is, a portion of the brain which hears, that portion of the brain must be morbidly excited before illusive hearing can take place. A conjecture, but, be it well marked, only a conjecture, may be here hazarded, namely, that that organ which, in its higher endowment, constitutes the perception of the relations of sounds in the melody and harmony of music, is in the lesser degrees in which it must exist, even in the most unmusical, the organ of the perception of sound. This conjecture seems yet better warranted when we take the aid of the analogy of Colouring; multitudes perceiving *different* colours with the same organ which in greater endowment constitutes in the painter the talent of the colourist. If we have conjectured aright, the organ of Tune, being in contact with the convolutions of the superciliary ridge, might become affected by the progress of the morbid action, and then sounds would be heard; and excited Language, also in the close contact of the other morbidly affected organs, might convert these sounds into words. This, however, it is proper to repeat, is only a conjecture, and will require much observation of fact before it can be stated more positively. One circumstance cannot be passed over;—Miss S. L. (who has a large organ of Tune), being asked if she ever hears music illusively, answered that she often does, and has gone all over the house in quest of the cause in vain. She has heard both singing and instrumental music, and very often drums and trumpets close to her ear. She added, that during the few last months, when she was annoyed with frontal headachs and illusive perceptions, she has unaccountably taken more delight than she ever knew in her music; sits several hours together at the piano-forte, where she before was very idle; and lately got out of bed to play

an air she had heard, and was desirous to preserve, the whole having come in a moment into her memory.

A case so comprehensive as that which we have just detailed, is of the greater value to the phrenologist, that, in explaining itself, it necessarily explains all other cases which agree with it in the kind of illusions, but are not accompanied by such marked local pain. With the exception of Mr R. of Hull's excruciating headach, which every one knows to be a very wide word, we are not told that either the Berlin or the Hull pot-house vision-seer had pain in the head at all, much less in the seat of the knowing organs. It is not unlikely that pain may have been felt in these regions and overlooked ;—if, which may not be true, pain *always* accompanies over-excitement of these organs. But it is not easy to withstand the retrospective effect of Miss S. L.'s case (in which the affected organs are pointedly marked), upon those cases where the phenomena were the same, but the organs not, in so far as we are informed, indicated by local pain.

It is a common remark, that whenever the attention of the phrenologist is called to some curious and especially marvellous fact in human nature, which he successfully explains, the publicity of the result brings out many similar cases which lay dormant, because in no request by any previous systems of philosophy. When the first Kilmarnock case of diseased Language was published in the Transactions, every fifth person who read it knew an old lady, or had an uncle, or was acquainted with a country gentleman, who suddenly lost the right application of words to things, although the patient preserved the most perfect articulation of the words which he or she misapplied. Conversations on the subject, added to what has been already published on that head, have brought upon us an inundation of cases of vision-seeing,—faces large and ugly in the dark,—a company of phantoms paying morning visits, and the like. We ourselves know a lady who has been for some years gradually recovering her nerves after a severe typhus fever, who is annoyed occasionally with forms of persons and objects which she has seen with interest and repetition, and is especially sensible of the perception of brilliant colours, both in her sleeping

and waking hours; on such occasions she, too, experiences acute pain in the middle point of both eyebrows, where the organ of Colouring, on each side, is situated. Her dreams of forms and colours are of the most vivid and real kind; and, during recovery from her fever, the grey, cobweb, semi-transparent, colourless spectres were her frequent visitors.

Sir Everard Home, in his Life of the celebrated John Hunter of London,* narrates, but makes no attempt to account for, a variety of illusive perceptions, which we are now in a situation to trace to the knowing organs in morbid excitement. In 1776, from great anxiety of mind, Mr H. had a severe illness. It attacked him on a journey, and his first sensation, it is well worthy of remark, was that *of having drunk too much*, although he had taken nothing but a little weak punch. On going to bed, he felt as if *suspended in the air*, and soon after *the room seemed to go round* with very great rapidity. This ceased, but the strange suspension, like Miss S. L.'s being lifted up, continued; and, on being brought home in his carriage, his sensation was that of *sinking or going down*. The symptoms of whirling and suspension increased; and his own head, when he raised it from his pillow, seemed to move from him to some distance with great velocity. When he became able to stand without being giddy, he was unable to walk without support; "for," says Sir E. Home, "*his own feelings did not give him information respecting his centre of gravity*, so that he was unable to balance his body, and prevent himself from falling." We need not add the obvious comment, that the organ of Weight was diseased, and the very function we have imputed to it, the instinct of equilibrium (expressed almost in our own words by Sir E. Home), unequivocally impeded.

Mr John Hunter's organ of Size was likewise diseased in this strange illness; for he was impressed with the idea that he was himself only two feet high; while, on the other hand, when he pushed down his foot, "it seemed to him to move a vast way." We know a gentleman, and the case is any thing but rare, who, when in fever, had the sen-

* Annexed to John Hunter's work on the blood and gun-shot wounds, published by Sir E. H. in 1794.

sation that his arm, or leg, or whole body, was extended to the size of a mountain; and another who thought his limbs made of brass. Colouring was also deranged in Mr H., for he long saw the fire a deep purple-red. He got well; but, about thirteen years afterwards, he had another attack, and its first symptom was a derangement of Locality; for, in the house of a friend, he forgot in what part of the town he was, and looked out of the window to refresh his memory in vain; "for he had not a *conception of any place* existing beyond the room he was in, yet was perfectly conscious of the loss of memory." Had Sir E. Home been a phrenologist, he would have known that Mr John Hunter manifested no *general* loss of memory, but, on his own shewing, merely of the memory of place. A fortnight afterwards, the giddiness which formerly afflicted him returned; and his biographer says, "when going to bed he had *entirely lost the centre of gravity*, although" (and we beg attention to the important qualification) "he could move his limbs as the will directed." So that the loss of the instinct of equilibrium is not, as may possibly be objected, the loss of voluntary motion. Objects lost their true direction. *A perpendicular seemed to him to lean to the left*, making an angle of 50 or 60 degrees with the horizon. He had often the unnatural sensation of having no head. His own supposition, for it is called no more, to account for the obliquity of objects, will amuse our phrenological readers, who have no need, if they were so inclined, to rest in suppositions. He supposed, "that the two corresponding oblique muscles had an unnatural contraction, which moved the two eyes round near thirty or forty degrees,—that the *obliquus superior* of the left eye brought the eyeball forward towards the nose, while the *obliquus inferior* of the right eye contracted equal to the *superior* of the left. This turned the under part of the right eye inwards, towards the nose, and the upper part outwards, which moved a lateral part of the eye upon the object, and gave it that obliquity!" We had no idea that the too common illusion of the intoxicated, that the floor on which they lie is perpendicular, needed such an explanation.* Mr John Hun-

* In reading, too, it is by no means uncommon to see the letters in obliquity, by a sudden affection of the head.

ter, without jaundice, saw every thing of a *yellow colour*. His own size was now four feet in his own idea; also objects appeared at an unusual *distance*, as if seen through a concave glass, (Size). "Objects in the mind were very lively, often disagreeably so; dreams had the strength of reality, so much as to awaken him; the remembrance of them was very perfect." It is not said that the patient saw visions when awake, but this description is the very next step to it. It is added by Sir E. Home, that during these illnesses the patient's senses of sight, hearing, and tasting, were excited to great sensibility and acuteness.

I should have great delight in following out this interesting subject, but must defer it as too extensive for one paper. If we can attach illusive perceptions to distinctly ascertained knowing organs in diseased activity, or in actual suspension of function, the illusions of fever will fall into their proper places, and even the monstrous persuasions of hypochondria. A person believes, for example, that his head is made of glass; diseased Individuality, Weight, and perhaps Colouring, would account for this miserable illusion. Mr John Hunter had the sensation of having no head at all.

The various perplexing ways in which the instinct of equilibrium was deranged in that eminent person, explained by the similar affections of our subject Miss S. L., accompanied in her's with pain in the seat of the organ, throw a flood of light upon the various ludicrous phenomena of intoxication. This subject will be more fully detailed in its proper place, in a paper on the organ of Weight. It is enough to say here, that Mr John Hunter's first uneasy feeling was that of having drunk too much. The intoxicated soon lose, as Sir E. Home calls it, the centre of gravity, without, however, losing the power of locomotion. The drunkard staggers, and measures as he goes the breadth of the road; but unless dead drunk, as it is called, boldly wends and often fights his way. Every sober person he sees appears drunk to him, and he the only sober person; and his case is completed when the ground itself appears to him to slope at an angle, and at last to arrive at an absolute perpendicular, on which he endeavours to hang rather than to lie. This is fearfully aggravated when the room turns round with him.*

* Vertigo, and the well-known giddiness from running round in

Many who have not been absolutely drunk, must have experienced the odd feeling of suspension in the air, as if their chair was borne up, when they have indulged freely in champaigne, in the rapid manner in which that liquor, in order to save its agreeable briskness, is quaffed off. Two or three glasses will produce the effect; but the equilibrium, if soon overset, is generally not long of being restored.

Locality is often amusingly confused in the intoxicated, as we have seen it affected in the cases we have narrated from other causes. Let us consider what enables a sober man to find his way home; it is his perception and memory of the relative position of objects. Some intoxicated persons preserve this power, but many lose it; and we lately were told by a young gentleman, that having dined at a tavern in Waterloo Place, he was found on the Pier of Leith in quest of his house in Charlotte Square! We know another gentleman, who, after intense conviviality, was much concerned to find, as he passed, that the Tron Church had got on the wrong side of the street; as he despaired of remedying the evil, he went home, but, with a proper feeling of public spirit, returned to give the alarm, by which time the building had got right of itself.

One drunkard who came in our own way, used an expression which much amused us; for it was a distinct and well-worded declaration, that he had lost the perception of the relative position of those objects which he perfectly knew when he was sober. Under the early beams of the summer sun, we saw him in the middle of the street maintaining a persevering and valiant contest with the laws of gravitation, as he stood on one spot poising his person. He addressed us with great politeness, and often repeated apologies and protestations of meaning no offence, and requested our advice and assistance, "*for he had lost the central point!*" He could name his home, which was not four hundred yards distant, and in our guidance he was happily restored to its shelter and concealment. We have no doubt our readers could furnish us with hundreds of instances of the same kind. There is every reason to think, that the accelerated circulation occasioned by intoxicating liquors,

play, is probably an affection of the organ of Weight or instinct of equilibrium.

overcharges the minute bloodvessels which supply that part of the brain where the small organs of the knowing faculties are placed. Language usually fails the intoxicated first, not only in its articulation, but in its application, and then follow the other phenomena which we have mentioned. The excitement makes its way into the larger organs of the propensities and sentiments, and the prevailing ones manifest themselves with great unreserve,* and to the great amusement of the sober spectator,—an advantage formerly held a breach of all convivial confidence,—till at last all the vessels are surcharged, the functions of the brain for the time suspended, and the victim lies, what is emphatically called, dead drunk, till profound and protracted sleep restores him.

The most valuable end of papers like that which we have now finished, is to point out those departments of observation in which all the friends of Phrenology can make themselves useful. Every phrenologist will be grateful for facts of the kind now detailed; and the existence of a Society, and of a Phrenological Journal, leaves no one at a loss as to the quarter where his information will be received and duly appreciated. Like a museum, which, with a sort of centripetal force, attracts detached articles in its own way, from all quarters where they are valueless because detached, so are the institutions I have mentioned calculated to attract detached facts, and convert them from mere perplexing marvels into the illustrations, and, in sufficient number and authentication, the demonstrations of the true science of human nature.†

* Vide scene in Mrs Macleary's, in Waverley.

† Bayle, in defending Hobbes from the belief of ghosts imputed by his biographers, makes a singular guess at the phrenological doctrine now delivered. He says,—"A man would not only be very rash, but also very extravagant, who should pretend to prove, that there never was any person that imagined he saw a spectre; and I do not think that the most obstinate and extravagant unbelievers have maintained this. All that they say comes to this,—that the persons who have thought themselves eye-witnesses of the apparition of spirits, had a disturbed imagination. They confess, then, *that there are certain places in our brain*, that, being affected in a certain manner, excite the image of an object which has no real existence out of ourselves, and make the man, whose brain is thus modified, believe he sees, at two paces distance, a frightful spectre, a hobgoblin, a threatening phantom. The like happens in the heads of the most incredulous, either in their sleep or in the paroxysms of a violent fever.

DUGALD STEWART, ESQ. ON MILTON'S GARDEN OF EDEN.*

THE application of phrenology, as an analytic instrument, has interested many of our readers; but the phrenologists cannot boast of the honour of originating this use of the philosophy of mind. Long before our science had raised its head, Mr Stewart had presented his readers with an

Will they maintain after this, that it is impossible for a man awake, and not in a delirium, to receive in certain places of his brain an impression almost like that which, by the law of nature, is connected with the appearance of a phantom?—If they are forced to acknowledge that this is possible, they cannot promise that a phantom will never appear to them; that is, that they will never, when awake, believe they see either a man or a beast when they are alone in a chamber. Hobbes then might believe, that a certain combination of atoms agitated in his brain might expose him to such a vision, though he was persuaded that neither an angel nor the soul of a dead man was to be concerned in it. He was timorous to the last degree, and consequently he had reason to distrust his imagination when he was alone in a chamber in the night; for, in spite of him, the memory of what he had read and heard concerning apparitions, would revive, though he was not persuaded of the reality of these things. These images, joined with the timorousness of his temper, might play him an unlucky trick; and it is certain, that a man as credulous as he was, but of greater courage, would be astonished to think he saw one whom he knew to be dead enter into his chamber. These apparitions in dreams are very frequent, whether a man believes in the immortality of the soul or not. Supposing they should once happen to an incredulous man awake, as they do frequently in his sleep, we allow that he would be afraid, though he had never so much courage; and, therefore, for a stronger reason, we ought to believe, that Hobbes would have been terribly affrighted at it."—BAYLE's Dict. voce *Thomas Hobbes*, Note N.

The ancients also had their apparitions:—

> "Somnia, terrores magicos, miracula, sagas,
> Nocturnos lemures, portentaque Thessala rides?
> * * * *
> Quid te exempta juvat, spinis de pluribus una?"
> HORAT. Epist. ii. lib. 2. ver. 208.

The *nocturni lemures* were phantasms which infested a house Pliny gives an account of one, lib. 7. epist. 27. "Erat Athenis spatiosa domus sed infamis et pestilens. Per silentium noctis, sonus ferri, et, si attenderes acrius, strepitus vinculorum, longius primo, deinde proxime reddebatur; mox apparebat idolon, senex macie et squalore confectus, promissa barba, horrenti capillo, cruribus compedes manibus catenas gerebat, quatiebatque. Inde in habitantibus tristes diræque noctes per metum vigilabantur." &c.

* By George Combe.—Vol. i. No. 2. p. 195.

analysis of the powers necessary to the conception of Milton's Garden of Eden.

In his Outlines of Moral Philosophy, Part I., he says, "The most important of these (the intellectual powers of man) are comprehended in the following enumeration:

"1. Consciousness.
2. Powers of external perception.
3. Attention.
4. Conception.
5. Abstraction.
6. Association of ideas.
7. Memory.
8. Imagination.
9. Powers of judgment and reasoning.

"Besides these intellectual faculties," continues Mr Stewart, "which in some degree are *common* to the whole species, there are *other* more complicated *powers* or *capacities* which are *gradually formed* by particular *habits* of *study* or of *business*. *Such* are the POWER of TASTE, a GENIUS for POETRY, for PAINTING, for MUSIC, for MATHEMATICS; with all the various intellectual habits acquired in the different professions of life."

Here, then, IMAGINATION is mentioned as a "faculty in some degree common to the whole species;" and TASTE as a "power gradually formed by particular habits of study or of business."

In the Elements of the Philosophy of the Human Mind, chap. vi. sect. 1, Mr Stewart states, that "what we call the power of imagination, is NOT the *gift of nature*, but the result of acquired habits, aided by favourable circumstances. It is NOT *an original endowment* of the mind, but an ACCOMPLISHMENT formed by experience and situation, and which, in its different gradations, fills up all the interval between the first efforts of untutored genius and the sublime creations of Raphael or of Milton."

As this doctrine concerning imagination appears to differ from that previously cited, we hold the latter passage, which is the more elaborately written, to contain Mr Stewart's profoundest views on this part of our constitution. According to him, therefore, neither TASTE nor IMAGINATION is the gift of nature, but both are formed and acquired by habits.

The following is his analysis of the faculties which contributed to the formation of Milton's Garden of Eden:

"Let us consider," says he, "the steps by which Milton must have proceeded in creating his imaginary Garden of

Eden. When he first proposed to himself that subject of description, it is reasonable to suppose, that a variety of the most striking scenes which he had seen crowded into his mind. The ASSOCIATION of ideas suggested them, and the power of CONCEPTION placed each of them before him with all its beauties and imperfections. In every natural scene, if we destine it for any particular purpose, there are defects and redundancies, which art may sometimes, but cannot always correct. But the power of IMAGINATION is unlimited. She can create and annihilate, and dispose, at pleasure, her woods, her rocks, her rivers. Milton, accordingly, would not copy his Eden from any one scene, but would select from each the features which were most eminently beautiful. The power of ABSTRACTION enabled him to make the separation, and TASTE directed him in the selection. Thus he was furnished with his materials; by a skilful combination of which he has created a landscape, more perfect, probably, in all its parts, than was ever realized in nature; and certainly very different from any thing which this country exhibited at the period when he wrote." (*Elements of the Philosophy of the Human Mind*, chap. vii. sect. 1.)

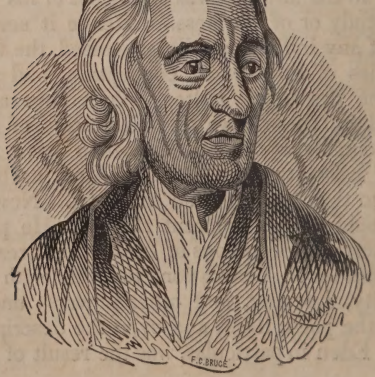
The Garden of Eden, then, was created by Milton by the aid of the powers of ASSOCIATION, CONCEPTION, ABSTRACTION, IMAGINATION and TASTE. Of these the first three are possessed by the whole human race; and Milton's superiority in the last two was the result of his "particular habits of study or of business." Hence it seems to us to follow, that any individual who possessed the three primitive faculties of association, conception, and abstraction, in the same degree as Milton, might have acquired his habits, and by these have formed powers of imagination and taste equally admirable, and then have written the Garden of Eden, or even Paradise Lost itself, if he had happened to turn his attention that way. Now, the phrenologist would form a different theory. He perceives in Paradise Lost manifestations of Ideality, of great reflecting faculties, and much Veneration, together with Language, Individuality, Locality, and other powers; and he would infer, that the poem itself, and even the description of the Garden of Eden in particular, was the result of the activity

of these faculties, improved by exercise and education,—and that without these natural gifts, Milton's habits could not have been acquired, nor similar manifestations of intellect have been produced.

To elucidate the value of Mr Stewart's theory and ours, we may compare with Milton an author in whom the primitive faculties of association, conception, and abstraction will be generally admitted to have been equal in vigour and cultivation, and see whether he could have been trained to write such a poem. Locke will serve as an example. In the three original powers in question, he appears to have been fully equal to Milton. In vigour of conception, scope of association, and intensity of abstraction, the Essay on the Human Understanding may be placed in the opposite scale with Paradise Lost, without danger of depreciation. Equal taste and imagination certainly are not displayed in it; but according to Mr Stewart, Locke, by possessing the primitive powers, could have acquired these secondary qualities, and rivalled Milton in the very points in which he is reckoned almost inimitable!

In the portraits of Locke we perceive a great development of the organs of Comparison and Causality, with rather

LOCKE.



a deficiency of Ideality; in those of Milton, on the other hand, we see the "fair large front," indicating Comparison and Causality equal to Locke's, with much larger organs of Ideality. To Locke we would ascribe, also, great Concentrativeness and Conscientiousness; and in Milton's portraits we distinctly perceive Veneration, in addition to Ideality, largely developed.

We infer that the heads of both were large; for great size of brain would be necessary to that powerful *energy* by which they were equally distinguished. Locke must have been conscious of this quality, when he contemplated the overthrow of the philosophy of his age; and Milton displayed it, in an eminent degree, when he characterized his song as one

> "That with no *middle flight* intends to soar
> Above the Aönian mount, while it pursues
> *Things unattempted* yet in prose or rhyme."

The combination of Concentrativeness with Causality and Comparison in Locke, would give him the great capacity for abstract and concentrated thinking, and that comprehensiveness and depth of understanding, for which he is so justly celebrated. Conscientiousness would inspire him with that ardent love of truth which constitutes a fundamental element in a philosophic mind, and shines conspicuously in all his works; while the deficiency of Ideality would unfit him for extensive flights of imagination, and permit his intellect to follow, undistractedly, its natural bent towards solid and useful investigation, in preference to ornamental description or sublime invention. Education would furnish his faculties with ideas, which constitute the *materiel* of thought; and exercise would educe their native vigour, and preserve it unimpaired until disease or the chills of age benumbed the brain. The Essay on the Human Understanding would be the result of those faculties and circumstances combined.

Comparison and Causality would confer on Milton depth, scope, and vigour of intellect, not inferior to Locke's; whilst Ideality, largely developed, would carry him far as the wide diurnal space beyond and above the region of Locke's imaginings: and his powerful Veneration would prompt him to seek for gratification of his feelings amid the

glories which surround the Almighty's throne. This combination, with much of the faculties of Language and Tune, would constitute the natural elements of Milton's genius; and to a capacity for improvement by education, exercise, and travel, equal to Locke's, it would add a susceptibility of elevated emotion, and a consequent power of forming vast, splendid, and lovely conceptions, altogether unattainable by the latter by any "habits of study or of business."* Thus endowed, Milton's mind would be adequate to the conception and execution of that stupendous poem, the melody, and taste, and beauty of which are surpassed only by its grandeur and magnificence. The Garden of Eden would owe its origin principally to Locality, Order, Colouring, and Ideality. Individuality and Comparison appear not only to have supplied particular illustrations of exquisite elegance and beauty, but also to have suggested some allusions to heathen mythology, and incidents of common life, neither dignified, appropriate, nor refined.

These remarks are offered not as a complete analysis of the genius of these two illustrious men, but merely as an elucidation of the difference between the metaphysical and phrenological modes of accounting for their productions. To us the latter appears, in the present instance, to make the nearer approach to nature and the common apprehensions of mankind; but Mr Stewart has said, "Is there no Arbuthnot now to chastise the follies of our craniologists?" And he is a great philosopher! The world must decide between us.

* The busts and portraits of Lord Bacon indicate a development of Ideality closely resembling that of Milton, and over all his works this faculty sheds a brilliant and fervid illumination. Locke approaches him in some degree in vigour, scope, and profundity of thought; but he is immeasurably behind in that gorgeousness of fancy which abounds in Bacon almost to excess.

OBSERVATIONS ON SOME OBJECTIONS TO PHRENOLOGY, FOUNDED ON A PART OF THE CEREBRAL DEVELOPMENT OF VOLTAIRE.*

A BUST of Voltaire has lately become common in the shops, and it appears to be the original of the well-known engraving of that person in Lavater's works. The development and combination of organs which it presents are, in many respects, so singular, and differ so widely from all others which we have seen, that no statuary or modeller would dream of compounding such a head; while, nevertheless, it bears the strongest stamp of nature in its details, and corresponds in so remarkable a degree with the mental character of Voltaire, that we are strongly persuaded that it is a correct representation of the head of that person in his old age.† Some years before the death of Voltaire, a statue to his honour was erected by subscription, to which several monarchs contributed; and it is probable that this is the bust of that statue. Although, however, we assign these reasons for holding this bust to be genuine, we are not particularly interested in that question in so far as regards our present object. It has been assumed by some of our opponents as an exact transcript of nature, and founded on by them as shaking phrenology to its base (for with them every objection, however small, always destroys the *whole* fabric of our science), *because it exhibits a large organ of Veneration.* Yes, the head of Voltaire, the most celebrated of infidels, and more, the most violent and implacable enemy of Christianity,—the imaginer and unwearied prime mover of a deep and dark conspiracy, with the Condorcets and the D'Alemberts, to root it out in Christendom, and extinguish its very name,—the malignant inventor of an appellation of keen reproach and hatred (L'Infame) for Him who, had he been mere man, lived in the ceaseless exercise of a glowing and active Benevolence, for which there is no human parallel,—Voltaire's head exhibits the pretended organ of *Veneration* in great endowment.‡

* By James Simpson.—Vol. iii. No. 12, p. 564.

† An engraving of two views of the bust will be found in the third volume of the Journal.

‡ We have understood that a celebrated antiphrenologist, in a

With great alacrity we admit, nay, found upon the unquestionable fact of this large development. Voltaire *had* a large endowment of the organ of Veneration, and the faculty he manifested as a prominent part of his character. The following is the development taken from the bust.

DEVELOPMENT.

1. Amativeness, large.
2. Philoprogenitiveness, full.
3. Concentrativeness, large.
4. Adhesiveness, very large.
5. Combativeness, very large.
6. Destructiveness, very large.
7. Secretiveness, very large.
8. Acquisitiveness, large.
9. Constructiveness, rather full.
10. Self-Esteem, large.
11. Love of Approbation, extraordinarily large.
12. Cautiousness, full.
13. Benevolence, rather large.
14. Veneration, large.
15. Firmness, extraordinarily large.
16. Conscientiousness, rather small.
17. Hope, large.
18. Wonder, full.
19. Ideality, large.
20. Wit, large.
21. Imitation, large.
22. Individuality, full.
23. Form, large.
24. Size, rather large.
25. Weight, rather large.
26. Colouring, rather full.
27. Locality, large.
28. Number, rather large.
29. Order, large.
30. Eventuality, full.
31. Time, large.
32. Tune, rather large.
33. Language, very large.
34. Comparison, large.
35. Causality, large.

It is evident that the objection to phrenology, founded on this large development of Veneration in Voltaire, proceeds, as do most of the current objections, upon that meagre knowledge of the subject to which, as in their estimation quite sufficient for its refutation, the opponents limit themselves. Had they read far enough, they would have learned that there is nothing in any of the phrenological books authorizing the doctrine, that Veneration is the impulse to religious adoration exclusively. Religious feeling is one of its directions, but not the only one, nor a necessary one; nay, observation has demonstrated, that it is by no means the most common direction of the faculty, and that the organ is often large, and very large, in persons who manifest none or very faint religious feelings; but in such persons it will not fail to shew itself in a sentiment of deference for superiority in general, whether it be of rank, or talent, or wealth, or any other common object of respect and homage.

paper read to the Royal Society of Edinburgh, was especially animated and triumphant on this notable discovery. We are much indebted to him for calling our attention to it.

"This faculty," says Dr Spurzheim, in his work published in London in 1815, "constitutes a sentiment, and not an idea. Gall observed this organ first in persons who were in the act of adoring God; and, according to all my observations, it seems that its special faculty is the sentiment of Veneration, *without determining its objects or its manner*. It is by this organ that man adores God, or venerates saints, *persons*, and things."

Sir George Mackenzie, in his work on Phrenology (1820), when treating of the sentiment of Veneration, speaks thus: "That Veneration is a sentiment, and not an idea, every one who feels it can testify, without the arguments so clearly stated by Dr Spurzheim. We are disposed to go a little farther than he has done, in reference to the extent of the operation of this sentiment, and to consider that it does not belong exclusively to religion, but that it also operates in prompting that respectful and yielding deportment, by which men commonly shew their feelings towards those who are superior in talents or rank, and those who are invested with authority."

Mr Combe* states the doctrine as follows:—"The function of the faculty is to produce the sentiment of Veneration in general, or an emotion of profound and reverential respect on perceiving an object at once great and good. *It is the source of natural religion*, and of that tendency to worship a superior power, which manifests itself in every nation yet discovered."—Again: "Hitherto we have considered Veneration only when directed to religion, which is undoubtedly its noblest end; but it has also many other objects, and a wide sphere of activity in the present world. It produces the feeling of deference and respect in general, and hence may be directed to every object that seems worthy of such regard."—"Veneration leads to deference for superiors in rank as well as in years, and prompts to the reverence of authority."—"Veneration may also produce respect for titles, rank, and power; for a long line of ancestry, or mere wealth; and it frequently manifests itself in one or other of these forms when it does not appear in religious fervour. Individuals in whom Love of Approbation and Veneration are very large, and Conscientiousness and intellect not in proportion, venerate persons

* System, 3d edition, pp. 276–281.

of higher rank than their own, and are fond of their society. Persons of rank who do not possess high virtues or talents, are fondest of the society of those in whom this combination occurs; it inspires its possessor with a habitual deference towards them, which is felt as a constant homage. On the occasion of King George the Fourth's visit to Scotland in 1822, some individuals experienced the profoundest emotion of awe and respect on beholding him; while others were not conscious of any similar excitement, but were surprised at what appeared to them to be the exaggerated enthusiasm of the first. I examined the heads of several of both classes, and, in the former, found the organ of Veneration uniformly larger, in proportion to the other organs, than in the latter."

When treating of the combinations of this sentiment with the other faculties, Mr Combe says: "If Veneration large is combined with large Acquisitiveness and Love of Approbation, the former sentiment may be directed to superiors in rank and power, as the means of gratifying the desires for wealth and influence depending on the latter faculties."*

Now, if these well-established principles be kept in view, and Voltaire's history attended to, it will at once appear that that history would have been widely different, had that remarkable person not felt and been permanently influenced by a strong sentiment of Veneration. Where do we find Voltaire when not in the Bastile, or in banishment or hiding for some literary outrage? Invariably with, or in correspondence with, kings, courtiers, or court-favourites. At the court of Louis XV., of George I., of Frederick the Great, of Stanislaus, he breathes the air of palaces, and basks in the favour of kings, princes, and nobles.

Newton sought no royal patronage to add lustre to a name which was above the glory of all the crowned heads in Europe united into one focus of splendour. Voltaire, too, had a gigantic, a towering literary name, which needed as little as Newton's the reflex lustre of royal favour. Why, then, did Voltaire court what Newton shunned? Kings were worshipped by Voltaire, and their patronage valued as the greatest of earthly benefits. It was because

* System, 3d edition, p. 576.—See these principles ably amplified in a paper on Veneration, in the Phrenological Journal, vol. iii. p. 1.

he felt strongly the sentiment of Veneration, in the first place; and because that sentiment took in him the very common direction of reverence for worldly power and grandeur, in the second. But Voltaire worshipped wealth and glory as well as royalty; thereby combining Acquisitiveness and Love of Approbation, in their abuse, with Veneration—the very combination which Mr Combe has so truly stated to be that which leads to court the great for the objects of wealth and preferment. He was, moreover—we speak from his notorious biography—a false and cunning character; in other words, had Conscientiousness deficient and Secretiveness large: just the combination, when joined with Veneration, of the flatterer and sycophant.

And now it happens that this is accurately the development indicated by the bust which is tabled, not quite prudently, against us; and it is impossible to conceive development and history more instructively coincident. His avarice was manifested in the various money-making speculations, not excepting lotteries,* in which Voltaire engaged with eagerness; and in the largesses for which he always conditioned with the crowned heads whom he served. His Secretiveness had ample scope in the clever intrigues which he managed, and in his successful missions to foreign courts, when it was necessary to penetrate their deeply-concealed purposes—a well-established function of the faculty. Indeed this organ is unusually large in the bust. His Love of Approbation, which is enormously large, was demonstrated when, not content with receiving the homage of the whole civilized world indirectly, in his retirement at Ferney, the sovereign arbiter of literature and taste, this restless victim of vanity made a doting pilgrimage to Paris, in his 85th year, to inhale once more the incense of popular applause. He was stifled with addresses and deputations, crowned with bays in the theatre in presence of the court and all the frivolous noblesse of France, and soon died of the over-excitement. Lastly, his utter destitution of Conscientiousness was manifested in the deep hypocrisy of his character;—"free-thinker in London, Cartesian at Versailles, Christian at Nancy, and infidel at Berlin;"† in short, scoundrel every where.

* Hope and Acquisitiveness large in the bust.
† Chalmers' Biog. Dict. *voce* Voltaire.

As Voltaire's Veneration was influenced by the other faculties with which it was combined, he was not a pure worshipper of royalty and nobility, but a systematically-interested one, and often played the sycophant, degrading to the last degree the faculty of Veneration. He licked the dust at the feet of Madame Pompadour, because the controller although the mistress of a king. He was employed to compose a piece for the festivities on the marriage of the Dauphin of France, father of Louis XVI., and produced "La Princesse de Navarre,"—"which," says Dr Aikin,* "though little applauded by the public, answered his purpose of ingratiating himself with the royal family. He was rewarded with the post"—of what?—"of *gentleman of the chamber in ordinary, &c.*" No man, we will venture to say, ever sought or accepted such a reward, who had not a liberal share of Veneration ready for worldly, and in no engrossing requisition for religious purposes. We have seen the same organ large in the head of a nobleman who held a similar office about the person of the late Queen Charlotte. The same character is manifested in the artful sycophancy with which he treated Frederick while he read with him and corrected his works, "praising," as he says, "the good, and drawing his pen over the bad;" yet his petulance and vanity ventured, out of the royal presence, an unlucky pleasantry about "washing the king's dirty sheets," the conceited phrase for revising his writings. This he did not mean should reach, as it did, the royal ear, and effect a breach with his exalted patron. When his key as chamberlain and the cross of an order were demanded from him, he returned them to the king with an adulatory epigram, in which he compares that sad necessity to a lover's returning the portrait of his mistress. "The physiognomy of Voltaire," says Dr Aikin, "was indicative of his disposition. It is said to have partaken of the eagle and the monkey; and to the fire and rapidity of the former animal he united the mischievous and malicious propensities of the latter. With strong perceptions of moral excellence and elevation, he was little and mean in conduct, a victim to petty passions and caprices,† never *at*

* Aikin's General Biography, *voce* Voltaire.

† He had so much of the higher sentiments combined with great intellect as enabled him to discover the excellence of many of the

rest either in mind or body, never tranquil or sedate ;* if he was a philosopher, it was in his opinions, not in his actions. He had been accustomed from his youth *to pay as much homage to rank and wealth* as his *vanity* would permit (which was the most powerful feeling of the two) ; his tastes of life were vitiated, and his manners corrupted ; he could not, therefore, be a consistent friend to virtue and liberty, though he might occasionally be captivated with their charms and zealous in their support. He was *habitually avaricious*,† although he performed some generous acts, which he took care to make known.‡ He was too *selfish* to inspire love,§ and too capricious to merit esteem.‖ He had numerous admirers, but probably not one friend."

Chalmers says of him : " From the high character of the moralist he frequently descended to the buffoon ; from the philosopher to the enthusiast ; from mildness he passed to passion ; from *flattery* to satire ; from love of money to love of luxury ; from the modesty of a wise man to the vanity of an impious wit ; from the faith of the humble Christian to the foul language and effrontery of the blasphemous atheist."¶ This last passage, though partaking largely of the vague language of random speculations in human nature, which often consists of definitions without clearness, distinctions without differences, and words without meaning, contains a fair portrait of the utterly unconscientious character which is so prominently indicated by the bust in question.

Having shewn that Voltaire made ample use of his large endowment of Veneration without directing it into the channel of religion, we have no objection to take up the question even in that field ; and think we can shew that Voltaire's infidelity was not the effect of a deficiency of Veneration in general, but the cause of a deficiency of Veneration for Christianity in particular.

virtues ; but so very little of Conscientiousness, and so much of the animal organs, as to render him incapable of acting on those exalted perceptions.

* We shall advert, in a subsequent part of this paper, to the cause of this condition of mind.

† Acquisitiveness large.

‡ Love of Approbation, with some Benevolence.

§ Self-Esteem, Acquisitiveness, and all the animal, and therefore selfish, feelings strong. ‖ Conscientiousness deficient.

¶ We have no doubt that atheist is a mistake for infidel in the above passage.

It is essential to our venerating any person or thing, that we shall believe it, in the first place, real, and, in the second, venerable. Voltaire could not have venerated the list of kings we have above enumerated, had he been persuaded that they were either nonentities, or only pretended kings; while, on the other hand, had his conviction been as complete that Jesus Christ was the Son of God as that Louis XV. was king of France, can it be doubted for a moment that the first would have excited his Veneration in a much higher degree than the second? But Voltaire did not commit the absurdity of at one and the same time believing and despising Christianity: he despised it because he did *not* believe it: in other words, it was to him neither a reality nor an object of Veneration; in which case it mattered not whether his impulse to venerate the real and the venerable was great or small. It is most superficially replied, that it requires deficient Veneration to be an unbeliever in Christianity. As well may it be said, that it was impossible for Voltaire, without deficient Veneration, to have been an unbeliever in the real presence of Louis XV., supposing he had discovered, by other faculties than Veneration, that there was before him only a likeness of that prince in wax. Veneration was not the faculty by which Voltaire estimated Christianity, more than it was the faculty by which he would have ascertained whether the figure before him was the real or the waxen figure of the king of France. It is highly probable, that he contracted an early habit of unbelief in Christianity by connecting it with popery, without applying his reflecting powers to the examination of its evidences and principles, or the doctrines of the Reformation.

But, farther, a person with the strongest tendencies to Veneration, may reject a particular system of religion as untrue, for which, when rejected, he cannot feel the slightest Veneration, while he may not at the same time be a stranger to that function of Veneration which is directed to its most legitimate object, the Supreme Being. Voltaire was not an atheist. His biographer, Dr Aikin, says,— "His attacks on the latter (ecclesiastical tyranny) included hostilities against religion in general, at least of the revealed class; *and whilst he admitted natural religion*, he destroyed its moral efficacy." His Veneration and Causality

acting together made it impossible for him to reject a First Cause; and it is well known that, under the belief that that First Cause exists, he built and inscribed a temple to "The Supreme," and, in 1756, wrote a splendid poem in praise of natural religion. Thus he venerated what he believed to be true, and did not venerate what he did not believe to be true, or positively believed to be false—a course perfectly consistent with the greatest conceivable endowment of the sentiment of Veneration.

The rumoured, and by some believed, horrors of Voltaire's deathbed, which have been referred to as a proof that he was not an unbeliever, are entirely discredited by the Baron de Grimm. He suffered great bodily torture, and had too predominant an animal constitution not to have great natural horror of death; but he refused, like Beaufort, even a sign to the curate of St Sulpice, who attended him, that he died a Christian. "Laissez moi mourir en paix," was his answer. De Grimm's Memoires, which are full of Voltaire, furnish several instances, not to be found in any of his biographers, of his having repeatedly assumed the Christian exterior for a day, to serve some most obviously interested purpose. These are all in their very nature proofs of utter infidelity as well as hypocrisy. In 1768, at Easter, when in his seventy-fourth year, he went, as *Seigneur de Paroisse*, in a sort of cavalcade or procession, attended almost *en prince*, and preceded by six large wax-candles, to communicate, "*faire ses paques*," in the church of the parish where Ferney was situated; and demanded a certificate from the priest. M. de Grimm cites a letter of "*notre seigneur patriarche*," as he calls him, to the Count d'Argental, in which he confesses that the whole ceremony was an expedient *to please the king and queen*, and to disarm some of what he is pleased to call his fanatical enemies. Hence the pomp, the ostentatious publicity, the certificate, and every thing but the genuine religion of the performance. Interested in every act, he took the opportunity of haranguing the peasantry upon the crime of robbery—of all things!—after the sacrament; fixing his piercing eyes on one whom he suspected of having robbed him, and cunningly adding, that restitution, either into the hands of the priest or the *lord of the parish*, would save all disagreeable consequences both here and hereafter.

Another time the bishop of the diocese complains—to whom?—*to the king*, of the irreligion of Ferney, of which the patriarch hears, and forthwith takes the Eucharist, *en viatique*, or privately. This he does in presence of two notaries, who draw up a regular *procès-verbal* of the ceremony! In his declaration there are at once *an homage to the king*, a sarcasm at transubstantiation, and a cut at his friend the bishop. In very sincere Christian forgiveness, "he declares, that, having his God in his mouth, he pardons all his enemies and all his cowardly calumniators *with the king*, who attacked his religion."—M. de Grimm adds, that this *simagrèe*, as he calls it, was ridiculed and scandalized in Paris, and its profligacy and purpose equally well understood.

But the whole *getting-up* is crowned when Voltaire applies for and obtains from the pope the high dignity of temporal father of the order of the capuchins! It at least serves to demonstrate the influence of that man all over Europe, to say nothing of the great *liberality* of the head of popish Christendom, that such an office should have been bestowed on a notorious infidel.

There are a few incidents in Voltaire's history which may be seized on as proofs of weak Veneration, to which we the more willingly advert, that they can be easily explained. When about twenty years of age, he was confined for a year in the Bastille for having written, or being suspected to have written,—which in France at the time was the same thing,—some piece against the government, and jested upon its conductors. If he did so, which is not stated as certain, it was before one ray of court sunshine had come in his way to excite his venerative feelings, and, at the most, seems to have been directed against the conductors of the government, the ministers; against whom the intense force of his selfishness would, in the shape of envy, naturally enough excite hostile feelings. He had powerful tendencies to satire,* and his enormous Self-esteem and love of distinction are quite sufficient to have induced him to make so high a venture. But when, on his liberation, he brought out his "Œdipus," and the Regent sent for him and told him "to be prudent, and he would take care of him," which was the moment from which his inter-

* Destructiveness and Wit large, which they are in the bust.

course with crowned heads began, we hear no more of his satires on the French ministers.

He got into the Bastille for six months again, in consequence of a private quarrel. Interest was used against him by the Cardinal de Rohan, because of his threatening to revenge with his sword an affront put upon him by the young Chevalier de Rohan, who had *caused* him to be caned in open day. But Voltaire had a lofty Self-esteem and violent irascibility, which would furnish him with quite countervailing motive enough for suspending his veneration for so very considerable a puppy as the young Chevalier de Rohan must have been.

Again, on his admission into the Academy of Sciences, in 1746, "it was to his honour," says Dr Aikin, "that he was the first who, in his discourse at reception, deviated from the custom of repeating the stale praises of the Cardinal de Richelieu."

Now, be it remembered, that the Cardinal de Richelieu had, in 1746, been dead just one hundred and four years. This is itself something in the account of Veneration. The cardinal would take no offence at the omission, and the premier for the time would, if he was curious in comparisons, take less; so that the innovation was most probably a refined act of adulation to the existing powers. At all events, the bold act was universally applauded; Voltaire's Love of Approbation, "his ruling passion," was gratified; and no harm was done to his interest. But, be all this as it may, Veneration is but one feeling, and Voltaire had several other powerful passions which would, in the course of his life, act often, both singly and combined, more powerfully than his Veneration. The existence of this last feeling is much more clearly demonstrated by its manifestation in the ordinary conduct of life, than its non-existence by occasional acts of pride and violence, when Veneration was for the time overmastered.

So much for the question of Voltaire's Veneration. But as we cannot dismiss his bust without making use of it as a *positive* testimony to the truth of Phrenology, we shall conclude with a few observations on his character at large. It is trite phrenological doctrine, that the selfishness of great Self-esteem and Love of Approbation cannot brook a rival, and especially hates one exactly similarly furnished

with these engrossing and exclusive feelings. In perfect conformity with this view, the self-esteeming and vain Voltaire became acquainted early in life, at Brussels, with that morbid and expanded piece of self-love Jean Jacques Rousseau; and the two worthies hated each other as intuitively as cordially at first sight, and in all time thereafter. Voltaire is farther well known to have hated and scrupulously avoided the poet Piron, who, as a satirist, cut as deep as himself, not sparing even the patriarch of Ferney.

The satire and sarcasm of Voltaire, his *risus Sardonicus*,—of which last his visage presents the *beau ideal*,—and all his ill-nature and malignity,* are features of character identified with his very name.—"In this warfare," says Dr Aikin, "he makes use of every advantage he can derive from his talent of placing things in a ludicrous light, unrestrained by a regard to truth or decency. (Conscientiousness small, and the 'whole brute part of him' excessive.) It was said by Montesquieu, 'When Voltaire reads a book he makes it, and then he writes against what he has made.' And this is the real secret of much of his wit; which, however, from its supreme art of raising a laugh, and making it stand for argument, was highly successful with light and frivolous minds."

Voltaire had all the unhappiness of an ill-regulated mind; "an impatience and restlessness of disposition and a morbid irritability of temper continually tormented him." This is in strict accordance with the organization, which indicates strong animal and selfish feelings, combined with but preponderating over the moral and social faculties, also of considerable power. There is no repose in the propensities when the masters: they are ever craving and never satisfied. "There is no rest for the wicked." While benevolence is placid and kindly, hope contented and happy,† veneration elevated and serene, and justice calm and dignified; vanity is insatiable, fidgetty, and easily mortified, pride is unsocial and gloomy, hatred, jealousy, rage, and revenge, are the tormentors of the bosom they inhabit,

* Wit acting through Destructiveness, with the additional poison of large Self-esteem and deficient Conscientiousness. So in the bust.

+ We mean Hope in good company; for, with Acquisitiveness, and without check from the better feelings, it is the curse of the gamester.

and sensuality offers not to the retrospective eye one spot of self-respect, self-approbation, or peace. It is difficult to imagine a being more tormented by sensuality and selfishness, more incapable of satisfaction, contentment, and genuine happiness, than Voltaire. About six years ago, the Parisian press produced a volume of memoirs, by Madame Grafigny, of the private life of Voltaire for the six months, when, driven from Paris for his irreligious writings, he resided with the abandoned Madame de Chatelet at Cirey.* He lived in open adultery with this woman, while the degraded husband dwelt in the house and herded with the servants. The apartments used by the selfish and guilty pair were fitted up with perfect comfort and almost oriental magnificence; while the rest of the chateau, in which they accommodated or rather discommoded their visitors, was scarcely wind and water tight. Madame Grafigny, author of the Peruvian Letters, took a two-months' refuge with them from the brutality of her husband. She had to submit to every species of degradation and insult; and, worst of all, was taxed with her contingent of the most fulsome and constant praise of the *idol*, as Voltaire was styled. A little piece sent her by a friend she durst not show at Cirey till she herself had interpolated it with some wretched verses of her own in praise of the *idol.*† "Sometimes, however, in spite of her idolatry," says the Quarterly Review, "she lets us see, though obscurely, the personal bigotry, the persecuting jealousy, the cruel and tyrannical vanity of this great enemy of bigotry, persecution, and tyranny; and it is not, as we have already hinted, the least instructive part of her work which shows that the bad passions, all that Voltaire, in his *rage* or his *pleasantry*,‡ attributes to priests and kings, actually raged in his own breast, and were limited only by his power of vengeance whenever his personal vanity or personal interests were affected." The worthy pair were in use to open their visitor's letters. (Conscientiousness!)—By this simple expedient having got at some correspondence of Madame Grafigny, they loaded her with the most ferocious abuse,

* The reader will find an analysis of this work in vol. xxiii. of the Quarterly Review, page 154.

† Love of Approbation out of all bounds in the said *idol.*

‡ Self-esteem, Destructiveness, and Wit.

continued for some hours in a joint irruption into her bedchamber in the night, with a false accusation of having stolen and sent to a friend a canto of that profligate poem, "The Pucelle d'Orleans," and then drove her from the house. We cannot withhold another passage in the Quarterly Review: "The latter half of the volume contains some unpublished letters of Voltaire's of no kind of interest. They are addressed to the President de Hainault, M. de Richelieu, and M. d'Argental, in the same style of smart flummery which characterizes his letters to these persons which are already known. We have not met in them a passage worth quoting. Voltaire was a man of astonishing quickness, and extent and versatility of talent; he had a great deal of worldly sense and of literary acuteness; and in individual cases, where his personal vanity, his ruling passion, was not compromised, he would sometimes be friendly and generous; but his *total want of all principle, moral or religious*, his impudent audacity, his filthy sensuality, his persecuting envy, HIS BASE ADULATION, his unwearied treachery, his tyranny, his cruelty, his profligacy, his hypocrisy, will render him for ever the *scorn*, as his unbounded powers will the *wonder*, of mankind."

Let any one, even moderately skilled in Phrenology, look at the bust now before us; and in the fearful development which it presents of the animal organs, with the lamentable deficiency of Conscientiousness, which best restrains from evil and prompts to good, added to one of the finest endowments of intellectual and communicative genius which a human being could possess, he will see the most irresistible of all proofs that that bust is a genuine cast from the head of Voltaire.

TRAVELS IN PHRENOLOGASTO.*

PHRENOLOGY has made a deep impression on this generation. It is *censé* by the wise and learned to be a nonsensical absurdity, a delusion, and every thing else that is unsubstantial or wicked; yet they cannot let it calmly await its fate, but are stirred up, by secret fear and ill-

* Travels in Phrenologasto. By Don Jose Balscopo. Translated from the Italian, 8vo, pp. 126. Calcutta, Smith and Company, 1825. Phren. Jour. Vol. iii. No. 12, p. 639.

suppressed hatred, to give it importance by the magnitude of their exertions to stay its progress, and root it out from the public mind. For twenty years the press has been labouring to accomplish its overthrow by ridicule, argument, and bold assertion; and the task is still unfinished: Mr Cruickshank caricatures it; Mr Jeffrey, at this moment (1826), is printing a third anathema against it, from his own pen, to be fulminated in the next number of the Edinburgh Review; and even in Asia the press teems with wit and allegory in ridicule of the science. For the credit of Asia, however, the work before us is by much the best that has appeared on its own side of the controversy. It is an imitation of Gulliver's Travels, and is executed with very considerable humour and ability.

Don Jose Balscopo, a native of Padua, having constructed a balloon on entirely new principles, presents himself before the people of England, and ascends from the gardens of Ranelagh, on the 5th of November, amidst the waving of hats and the acclamations of thousands. He rises to a great height, falls asleep, awakes, and sees land not above six miles over his head. His balloon gently touched the ground, and, after rebounding three times, he alighted among the inhabitants. This nation had the sky below them instead of above; and though he was perfectly secure in walking with his head downwards, he could not but at first indulge some apprehensions on that score. The people are a very wise and intelligent nation; and he "was afterwards taught, that this apparently perverted order of things was only an optical deception, arising from the inverted position of objects on the retina of the eye, to which experience only makes us accustomed."

The inhabitants wore their hair very closely shaven, had their heads painted white, and the surface divided by black lines into "a variety of little fields and enclosures."—"These divisions, among the bulk of the people, amounted altogether to 33; but a few gentlemen, dressed in long black gowns, who appeared to possess some authority among them, had extended them, by fainter lines, to a much greater number."—The dresses of both sexes were ornamented with skulls; and "one lady whose name I refrain from mentioning, on whose dress was a great profusion of these insignia, afterwards assured me, that they

represented the skulls of all her ancestors in a direct line for fifteen generations, and amounted to the enormous number of 32,768."

The Lord Chamberlain hospitably entertains the author, shews him the country, city, shipping, &c., and then narrates the history of the island. "Signor Balscopo, said he, the flourishing country which you here see is the famous kingdom of Phrenologasto, the capital of which, in the Italian tongue, is Cranioscoposco. The origin of the nation, as it has been recorded in all our most learned works, and handed down by tradition through twenty-five centuries, is highly curious and instructive. Our forefathers, you must know, from whom the whole colony is descended, were originally twelve inhabitants of that part of the globe to which you belong, which is called Egypt. At the time when that country was renowned for the occult sciences, and had obtained a glory for learning and philosophy which has been since eclipsed by the pre-eminence of other states, there lived a sect of philosophers who devoted their whole labours to the study of craniology. Start not, young man, he continued (for I began to be incredulous), start not at this information which I observe was unknown to you, and from which I can perceive that you look upon that noble art as an invention of modern days. Is it then indeed true, that this profound science, which was once the glory of Egypt, has been again lost to the world? Holy fathers! can it be so? No wonder that the world is in its present state of degradation and darkness! Alas! alas! too truly did the wise Proco, looking through his telescope on the world below, allege, that the art there had again sunk into oblivion!

"But to return to my history:—So great was the progress which our ancestors made in this science, and such the success of their studies, that, by great care and perseverance, they at length brought the development of all the faculties of the mind to the very highest perfection; but being, from national taste, peculiarly addicted to the study of mathematical learning, they gave the principal part of their attention to the cultivation of those organs which gave birth to this science; so that, in process of time, by the examination of the different gases, and certain speculations on the properties of air, one of the most learned

of my countrymen succeeded in forming a balloon, in which, with the help of a proper stock of provisions, he declared it was quite practicable to make a journey to the moon. The greater part of the people, who had no perfect idea of the boundless extent of science, and the perfectibility of human skill, treated the proposition as chimerical; but our astrologers had many years before predicted that such a journey would be undertaken, and philosophers were more induced to attempt it from the hope of obtaining some further insight into their favourite study of astronomy. A committee was accordingly formed, a joint-stock established, and twelve of the most adventurous speculators in the kingdom embarked with their wives and families in this balloon, which was as large as a good-sized ship. Having laid in a plentiful stock of provisions, the whole party, after three months' voyage, landed very comfortably on this island, which we have since ascertained is only a tenth part of the distance to the planet they were in quest of.

"The noble science, which thus conducted our ancestors to this delightful spot, became of course the peculiar study and delight of their posterity. The elevation to which they had ascended, gave, it is said, a superior elasticity to their mental faculties, which, as tradition records, is unknown in the land from which they came. Be that as it may, they quickly perceived the important truth, which before was very imperfectly appreciated, that the basis of all knowledge is virtually situated in the shape of the skull. This sublime discovery, which to us, by reason of a second nature, has now become an intuitive truth, in those days, as historians declare, could only be understood by a train of reasoning—an extraordinary fact, which of itself shews the degeneracy of the human mind in those dark ages of the world, that a truth so very self-evident should require any demonstrative reason to establish it.

"It is by the gradual prosecution of this enlightened philosophy, which our first parents thus introduced into this island, that our present grandeur is founded. It is this that forms the intellectual basis, from which those wonderful discoveries have taken their rise, which have raised our people to a pinnacle of glory far above that of any kingdom on the earth, and to a degree of wisdom before which the highest flights of terrestrial genius dwindle into nothing. It is this which has given as it were a new

creation to mind, and, by teaching us the true method of its cultivation, has given that grand and sublime expansion to her energies, which has enabled us to penetrate into all the secrets of nature, to trace the course of the most distant stars, and to examine the internal economy as well as the universal laws of all created matter."

Signor Balscopo makes a rapid survey of the manners and institutions of the people of Phrenologasto; and, in touching upon appointments to public offices, education, philosophy, morals, religion, fatalism, criminals, insanity, &c., the author ridicules, with no little talent, the supposed consequences of phrenology when practically applied. The work is exceedingly amusing to a phrenologist, from a mixture of sound inference, which the author mistakes for absurdity, with real nonsense, the invention of his own brain. We select the following as one of the happiest sketches:—The Signor is sailing in a boat with Dr Nichodemos, an old man, and his petulant son. The old man applies to the doctor to amend his son's dispositions; on hearing which the lad, in a fit of violent passion, throws his father overboard, who is drowned. "An early day was appointed for his trial, which in this country generally takes place within as few days as possible from the apprehension of the prisoner. The judge and the lawyers of the town were assembled in the court, and the philosopher, myself, and the countrymen, were brought in before them. The first part of the proceeding was to take down in writing our several depositions. After this a certain instrument was produced, and our organs of veracity being all exactly measured, their dimensions were committed to paper, and compared with the statements we had already made. When these preliminary arrangements had been completed, the prisoner himself was introduced. The examiner laid hold of his head, and, measuring the destructive organ, noted down the particulars in a book. The form of the other principal faculties being in the same manner ascertained, the counsel for the crown began the prosecution. They stated, that they had found in the heads of all the witnesses, with the exception of that of Dr Nichodemos, such satisfactory developments of the organ of truth, as left very little doubt of the correctness of their statements. As for the learned Doctor, in whom that organ was less manifest, since his testimony tended rather to exculpate the lad, it

was on that account the further proof of the aggravation of his crime. In conclusion, they observed, the truth of the whole charge was still more fully corroborated by a very large development of Destructiveness in the young man himself.

" The counsel for the prisoner denied the accuracy of this conclusion. They admitted the fulness of the faculty of truth in Signor Balscopo, the principal witness; but they did not consider his testimony so deserving their credit as that of Dr Nichodemos, so well known in the world as a man of great wisdom and penetration, and of the most honourable and upright character. (The Doctor bowed profoundly to the court.) As for the prisoner, the counsel observed, that though the destructive propensity had been ascertained to be three-fifths beyond the ordinary dimensions, still the organ of Benevolence, being a full half larger than usual, and that of Veneration two-tenths, the above-mentioned organs conjointly bearing a preponderance, proved, beyond a doubt, that the destructive power could not have possibly acted in the manner asserted. He referred to the statute-book, to the thirty-fourth act of his late majesty, that two good organs, being conjointly larger than one that was bad, disannulled the evidence of the latter. In confirmation of which, he begged to draw the attention of his lordship to the case of Cardinivers Cardamum, by which he shewed, that the judges in a similar case had entirely thrown aside the evidence of the witnesses, finding that the good qualities of the prisoner exceeded in the aggregate the veracity-bumps of all the witnesses put together.

" The opposite party denied the conclusion, and maintained, that the case quoted by the learned counsel was quite irrelevant to the present one. If the organs of Veneration and Benevolence exceeded that of Destructiveness, still it was only by one-tenth part; but if they would examine the prisoner's head, they would find that this apparent surplus of a good disposition was fully counterbalanced by the organ of Anger, of which there was a very great profusion, proving thereby, beyond a doubt, the commission of the crime. A neighbour of the old man that was drowned deposed, that his organ of Philoprogenitiveness was unusually large; and the learned judge argued very profoundly, that this, from which had arisen too much

parental fondness and indulgence, was therefore the necessary cause of the boy's misdemeanour. His lordship, in summing up the evidence, adverted, as usual, to the criminality of those who, in the early youth of their offspring, allow their irascible faculties to acquire so great an ascendency. At the same time he very feelingly stated the inconvenience which might result to society if the boy was to be allowed any longer to go at liberty. He concluded, therefore, by observing, that he was under the painful necessity of confining him in the town jail till he amended his manners,—a sentence which he had the more regret in pronouncing, as the old man himself, to whom the misfortune had happened, was in fact the efficient cause of his own death, the punishment of which had devolved on his son, who appeared to be, as far as he could observe, a youth of promising genius and very commendable behaviour.

"After the trial, the judge and Doctor Nichodemos dined together, and talked very learnedly of free-will, physical necessity, and predestination. On the following day my companion introduced me as a friend, he said, of his, of some natural talent, which, however, was sadly obscured by a variety of prejudices and narrow-minded notions, which, it was to be hoped, a longer residence in this country would speedily remove. We left this place the following day, and as we went along, the conversation turning on the result of the trial, I expressed my astonishment at the lenity of the sentence, as I had all along not the least doubt but that the villain would have been hanged. 'You must be in great ignorance,' replied the Doctor, 'not to know, that no crimes among us are capital. The criminal code of this country is remarkable for its simplicity, and its adequacy to answer all the true ends of justice. It specifies merely the several species of crimes, and the particular sum of money which is levied on each of them.'—'How!' replied I, 'are all crimes then atoned for by a pecuniary compensation?'—'They are so,' replied the Doctor: '300 dollars is the established sum for high treason; 200 for a murder, but 150 for manslaughter; 85 is the sum for robbery on the highway; 20 for a pickpocket, and 16 for a sheep-stealer. I will tell you in what manner these fines are levied. It is an invariable maxim among us, as you already know, that the skull, after a certain age, by the induration of the *pia* and *dura mater*, and the conjunction of

the *ossa bregmatis et occipitis* with the *os ethmoides* or *cribriforme*, acquires an unchangeable form, in which the faculties of the mind are for ever afterwards fixed. All actions, therefore, perpetrated after that age, are to be attributed, not so much to ourselves, as to the preceptors of our youth, who, having under their care the disposal of our heads, before the above ossification takes place, are justly answerable for the result. If any person, therefore, commits, for example, a burglary, (for which the fine is 70 dollars,) the government, in their wisdom, extending their views to the primary cause from which the evil has arisen, demand the sum, not from the person by whom the burglary is committed, but from those who had the education of him when a boy. In this manner the greater part of these sums are levied on the University of Boldosbosko.* At the same time, for the preservation of the safety of society, and to prevent the recurrence of a similar offence, the immediate malefactor is confined in prison; if it be a murder, for life, but if a less serious crime, for a shorter period. In the mean while the penalty incurred by the university is payable, half to government, and half to the person who suffers through their neglect the inconvenience of this imprisonment. He, however, (the misfortune not being attributable to himself, and therefore no real stain on his character,) is of course visited as usual by his relatives, and holds the same rank in the estimation of society as before."

On the whole, we wish all our opponents were able to shew as much invention, wit, and real humour, as this author. He is really amusing, and shews great aptitude for this style of writing. We hazard the conjecture, that the organs of Secretiveness, Individuality, Language, Comparison, and Ideality, are all amply developed in his head, with rather a respectable portion of Causality and Wit. If the former organs are deficient in his head, this one fact will give a severer blow to phrenology than the 126 pages of goodly octavo which we have now noticed.

* There is excellent humour in this idea; but it is applicable much more to the patrons of the old philosophy than to the phrenologists. They hold, that education forms the mind entirely, and ought to pay for not making perfect men. We admit Nature as setting limits to art, and do not pretend to the power of controlling her entirely.—EDITOR.

SCOLDING OF JURIES.*

In the Scotch criminal courts, after the witnesses have been examined, and the counsel for the crown and the prisoner have each addressed the jury, the presiding judge recapitulates the statements of the different witnesses, makes comments upon them, explains such matters of law as require to be dealt with, and finally directs the jury what verdict, according to his views of the case, they ought to return. It sometimes happens, however, that they differ from him in opinion, and give a decision opposite to that which he has recommended. The verdict decides the fate of the prisoner; but if he has escaped when the court thought he should have been found guilty, it is not uncommon for the judge to address the jury in a strain of rather strong and vehement vituperation. We have heard jurymen complain of this treatment, and regard it plainly as a scold for having decided according to their own conviction, and not according to that of the bench.

We shall endeavour to analyze phrenologically the *rationale* of this proceeding.

First, the human mind has received a definite constitution, and its operations are governed by determinate laws. A man believes that three times three are nine, in consequence of his faculty of number perceiving the relations of these quantities; but if in him the organ be very small, and the faculty in consequence weak, he may have great difficulty in finding out how many 14 times 19 are. Suppose we wish to convince him that the amount is 266, we must lay before him the simplest elements of the calculation, and advance step by step till he see it as we do. If he fail in attaining the right result after all our pains, the proper inference is, either that we have not been sufficiently explicit in our demonstration, or that his faculty of number is so weak as not to be able to comprehend the computation. If the first has been the cause, we must bear the blame ourselves; if the second, we ought to avoid in future placing that individual in a situation where the power of calculation is necessary to the discharge of his duties: but in nei-

* By George Combe.—Vol. iii. No. 10. p. 310.

ther view is it proper to scold him for the disappointment that we meet with.

In judging of moral guilt or innocence, the laws that regulate the mind are analogous. If the case is simple and the evidence clear and strong, the conclusion will be as intuitively reached as in the calculation of 3 times 3; but if the circumstances are numerous and complicated, stronger moral sentiments and intellectual faculties will be required to arrive at a sound judgment. If the major part of a jury happen to be deficient in Conscientiousness and reflection, they may, in such cases, experience a real difficulty in detecting justice. After the witnesses, counsel, and judge, have done their best to enlighten them, they may still involuntarily wander in error from sheer incapacity to feel justly;—we say to *feel* justly, because Conscientiousness is a sentiment, and justice must be felt, and cannot be imparted by intellect alone, like a logical or mathematical demonstration. If, on the other hand, the jurymen possess an average endowment of the moral and intellectual powers,—then, as evidence produces conviction according to regular laws, the cause of the verdict being erroneous must be sought for in the imperfection of the manner in which the faculties have been addressed. Even prejudice itself, if it has been the occasion of the error, must owe its existence, after the trial, to one or other of these causes. Prejudice is a preconceived opinion of the guilt or innocence of the party accused, taken up before entering the jury-box; but every opinion, however formed, must necessarily yield to the force of evidence, unless the natural capacity for recognizing truth be too feeble, or the evidence itself be deficient in strength and precision.

Whether, therefore, the disappointment of the judge arises from natural incapacity in the jury, or from imperfection in the steps necessary to produce conviction, it is unphilosophical to blame them for their verdict. They are not entitled by law, even although inclined, to recall their opinion, and adopt that of the bench; so that, in the case in which they are found fault with, it is impossible for them to remedy the evil. The only effect of scolding them, therefore, must be to make them slavishly follow the direction of the judge *in future trials*, and not trust to the impressions made on their own minds—a result to be de-

precated above every thing, as defeating the very end of their institution.

But farther, it is a possible case, that a judge himself may be deficient in the organ and faculty of Conscientiousness; and then the impressions made on his mind by the evidence and speeches of the counsel, would not be a correct reflection of that which would arise in the minds of individuals in whom Conscientiousness was strong. Every faculty has a natural language of its own, which is recognised only by the same faculty in others. An unconscientious witness may give evidence so feasible to the intellect, that a person with a deficient Conscientiousness may not detect imperfection in it; while an individual with a strong Conscientiousness might feel that the substance of truth was wanting. Suppose such evidence contradicted by the testimony of another witness, in whose tones and manner truth spoke out in her native language, a person with Conscientiousness strong would instinctively believe the latter; while another, in whom that faculty was weak, would probably be led by sympathy to believe the former. Accordingly, if a jury possess average intellect and moral sentiments, and a judge find them return an unanimous verdict in opposition to his charge, we think the philosophical inference is, either that some obstacle in the way of arriving at a sound judgment has existed, which has not been removed, or that his own impression is erroneous; and again we arrive at the conclusion, that it is not proper to blame a jury for expressing in their verdict the opinion which they have actually formed, whatever its merits may appear to the mind of another individual to be.

CASES OF W. C. M. OF EDINBURGH, AND MISS W. OF LONDON, farther illustrative, respectively, of the Phrenological Explanation of VENTRILOQUISM and HISTRIONIC PERSONATION.*

ONE of the most important ends of a periodical journal for the advancement of an inductive science, is to record

* By James Simpson.—Vol. ii. No. 8. p. 582.

faithfully all additions which are made to the range and sum of the induction. In fartherance of that purpose, we must be occasionally called to recur to particular subjects of inquiry—to proofs and reasonings on which we have already written; but if we shall bring with us fresh proofs, additional illustrations, or yet more conclusive reasonings, we do not fear that the recurrence will be tiresome; but trust, that it will not only possess interest in itself, but increase, retrospectively, the value of the previous discussion.

Having lately met with two interesting and instructive cases—the one eminently confirmatory of the theory of ventriloquism which we formerly offered,* and the other farther illustrative of the view taken by our northern school of the elements of a talent for dramatic performance—we feel that our readers have a claim upon us for an account of them. We appreciate the first case the more, as it is one which our publication *attracted*—one which we did not seek, but which sought us.

W. C. M., about seventeen years of age, learning the business of an optician and mechanician in Edinburgh, a youth of curious and inquiring habits, was attracted to the ventriloquial performances of M. Alexandre, which took place last year in our city, and were formerly noticed by us. He repeated his attendance several times, and began to *imitate* that celebrated ventriloquist. He had made considerable progress in this curious vocal illusion, when he read in our third Number the paper on the subject with which our readers are familiar. They will recollect that the view there taken of ventriloquism is, that it is the exercise of a very high endowment of Imitation as its basis, with great Secretiveness, Tune, and Individuality, in combination;—the first of these three auxiliaries giving the power of concealment of self, which is essential to perfect mimickry; the second, perceiving the minutest modulations and gradations of sounds; and the third, giving a quick and retentive observation; while the more mechanical requisites of flexible organs of speech and skilful management of breath are the mere instruments of these enumerated powers of mind. It was because we did consider the use of these instruments as merely mechanical and ministerial, that we objected to the proposition of Conrad Amman, a

* Vol. i. p. 466. See p. 22 of the present Selections.

Dutch doctor, that the whole mystery of ventriloquism is explained by the fact, that the performer speaks during *inspiration* of the breath, and as it were swallows his words; and because we felt, that all the apparent changes of direction and graduation of distance remained to be accounted for as much on the supposition of inspiration as of expiration.

W. C. M., however, finding that, in ventriloquizing, he often spoke during inhalation, very naturally fell into Conrad Amman's error, and concluded, that that mere mode of speaking is the *whole* of ventriloquism. He forthwith, of course, felt all that personal weight in the controversy which belongs to a man who not merely has, but who *is* an incontrovertible fact in the inquiry, and he owed it to the cause of science to put *us* right, that we might do no farther mischief in that behalf. Mr George Combe, being the fountain-head, in this country, of phrenological truth, was justly held by W. C. M. to be the principal in all accusations of phrenological error, and, taking his hat, W. C. M. was speedily in Mr George Combe's study, *in forma impugnatoris*. Mr Combe, satisfied by a glance at his head, that the objector was a *walking fact* in confirmation of the truth of that theory which he was there to impugn, waived all discussion, and sent the challenger to the author of the paper objected to, who, in the same half-hour, was arraigned for false doctrine in the joint names of W. C. M. and Conrad Amman. There is no variety of that most various of all things, the ludicrous, to be compared with what a phrenologist quietly enjoys in his little-suspected advantage over an opponent, or, better still, a disdainful enemy, whose own cranium *rises up* in judgment against his all-sufficient reasonings. Our inspirationist was the reverse of a scornful or uncandid adversary; for he stated his charge with much *naiveté* and seriousness; but his development nevertheless was an amusing commentary upon his text. He happened to sit opposite to the windows, and the light fell so unequivocally upon Imitation, the salient fore-ground of his head, that the incongruity was nearly as intense as it is when the Great Mogul has his work-day name, his address in the city, and his domestic situation all placarded on his back as he struts into the motley crowd of a London masquerade. We took for granted that Mr

Combe had put his hand on *that* part of M.'s head. He said he had. Observing a considerable development of Secretiveness, Tune, and Individuality, we asked him if he was a ready mimick, both of the gestures and tones of voice of others, and of any sounds,—such as the cries of animals, and the noises of inanimate things, as saws, planes, and the like.* He answered, that he was not himself conscious of imitating on any occasion; but his friends told him, that he actually did imitate the voice and manner of any person he met with. In farther proof of this instinctive operation of the faculty in him, he informed us, that some years ago he was two years in London, when insensibly he acquired the English accent, only to lose it again, equally unconsciously, on his return to Scotland; and assuredly, as we can vouch, all traces of it are now gone. This automatical operation of Imitation is equally curious and important.

Two of our phrenological friends, who had repeatedly seen Alexandre perform, happening to come in, our visitor was requested to exhibit his powers as a ventriloquist. He first addressed a person supposed to be at the top of the chimney, and had scarcely spoken a dozen words when his audience looked at each other, and all of them at the same instant exclaimed,—"*Alexandre!* tones of voice, broken English, and all." One person present who had not witnessed the French ventriloquist's exhibition, at once observed, that W. C. M. spoke with a foreign accent. His performance proceeded, and it was Alexandre's throughout, the dialogue and incidents having been accurately committed to memory. He was of course sufficiently aware that he performed Alexandre's scenes, but declared himself quite unconscious that he imitated his accent and tones of voice. The chimney-top dialogue,—that with a person

* It is worthy of observation, and some instances which we have met with seem to countenance the distinction, that the power to mimick sounds, and to mimick motions, are not both necessarily possessed by the same person. The distinction will be at once apparent by recollecting, that deaf and dumb persons cannot mimick sounds, but are often adepts in the imitation of gait, gestures, and expressions of countenance. Even in those who hear, we conjecture that Tune is necessary for the nicer discrimination of sounds. The case of Miss W., in the sequel, will be found in point; her Tune being inconsiderable, and her mimickry almost entirely confined to action.

supposed to be down in a cellar, and ascending to a trap-door now open and now shut,—and with another at the same time in a closet, the door likewise sometimes open and sometimes shut,—as well as a communication with a person in a quart bottle,—were all perfect, and fully equal in illusion to the same things as done by Alexandre. Indeed with regard to that most difficult feat in ventriloquism, the perspective as we formerly called it—the gradual change of sound to suit distances which are supposed to be varying, in consequence of the person seemingly conversed with advancing or receding, our aspirant was quite Alexandre's equal. For the voice of a supposed stationary person, one sound without change is sufficient, and the difficulty is lessened. The graduation of the voice in the supposed ascent and descent in the chimney was so perfect, that, after one or two trials, we could tell in what part of the vent he intended his friend at any one moment to be. We found it more difficult with him, when we made the effort, to undeceive ourselves as to the direction of sounds, than with Alexandre.

On paying particular attention to the use W. C. M. made of his breath, we observed that he did, for certain effects, but by no means always, speak during inspiration. When a very distant or stifled sound was necessary, as that of a voice from the top of a chimney, or from the inside of a well-corked quart bottle, the words spoken during inspiration resembled most that distant or stifled sound; but the moment it was necessary to bring the sound nearer, or to uncork the bottle, the voice was imitated during expulsion of the breath. Indeed it is quite impossible to graduate the sounds by the inhaling method alone. W. C. M. found, on trial, which he made before us, that he could equally easily ventriloquize during expiration. In truth, he did this unconsciously every time he changed the voice; but he had given his attention to the inhaling effort alone, as to him the most new and remarkable. This was evidently the origin of Conrad Amman's mistake. We do not doubt that for low stifled sounds, either close at hand or very remote, the Amsterdam old woman spoke during inspiration, which singular effort was noticed, while her imitation of other sounds, which could not be produced dur-

ing inhalation, were still imputed to the same effort. Mr Alexandre assured us, that *he* never ventriloquized during inhalation, which shews that it is not essential; and W. C. M. like the Dutch woman, resorted to this method as *one* way merely of producing the illusion of change of direction of the voice; in other words, as one of the instruments of his Imitation, Secretiveness, Tune, and Individuality. Let any one not so endowed try to ventriloquize,—and any one may and can speak during inspiration,—and it will be found that he may speak during inhalation to suffocation, without imitating sounds which the bystander shall be forced to refer to a distance—to the top of a chimney, or the inside of a bottle. What W. C. M.'s case has thus called us to say is scarcely a modification of our former doctrine; for, in the first volume of the Phrenological Journal, p. 473, we observed,—"It is admitted, that a low stifled sound may be produced for a few seconds during inspiration; but the high and often strong voice of the ventriloquist can only result from a brisk *expulsion* of air from the *trachea* by an increased action of the part. The Amsterdam woman spoke high, but it was Conrad that concluded that she spoke during inspiration. Besides, there is no reply to the objection, that inspiration, no more than speaking with the belly, will account for variations and distances."

One effect of our experiments with W. C. M. was his own complete conversion to our views on the subject of the use of the breath during ventriloquism; and the more minutely he has since attended to our explanation of the vocal illusion called ventriloquism,—which attention has been much aided by a slight acquaintance with Phrenology,—the more he is satisfied that that explanation is in all its parts correct.

We formerly described Alexandre's wonderful powers as a personator—a talent which enabled him to *conceal himself*, as he expressed it, and assume another form and face before our eyes. In this W. C. M.—for he attempted it—is immeasurably Alexandre's inferior. We are at no loss to account for this by comparing the degree in which each has the secretive power. Alexandre's Secretiveness is marked *very large*, while W. C. M.'s is only *rather large*. M. Alexandre's total development we formerly gave; W. C. M.'s is

now subjoined.* It would scarcely be fair to compare what may be called the acting or scenic power of W. C. M. with that of Alexandre, as the one is a practised performer, and the other a mere boy and novice; but it appeared to us, that the same inferiority in Secretiveness which threw him behind the Frenchman in personation, will prevent him from overtaking him in spirited acting.

We have been led by certain characteristics of the case of W. C. M. to pay some farther attention to the faculty of Imitation in its higher endowments, and no one of its qualities has struck us more forcibly than its unconscious and almost automatic character. We have recently met with several instances of a high degree of the power being possessed unsuspected by the possessor. We lately predicated Imitation in a person who had the organ large. He furnished us with yet another example of the most common of all things,—a well-educated, clever, thinking, grown-up gentleman, unacquainted with himself, however confidently he may scorn that imputation; for he positively denied that he ever mimicked or imitated in his life. Some friends present, who knew him better, bore unanimous testimony that the gentleman actually *falls into* the voice and manner of any one to whom he pays minute and continued attention. This very quality of unconscious operation is sufficient of itself to demonstrate, that Imitation is a distinct primitive impulse of our nature. The manifest purpose of its being bestowed, in a greater or less degree, upon the whole human race, is to produce that general uniformity of

* 1. Amativeness, rather full.
2. Philoprogenitiveness, rather large.
3. Concentrativeness, rather large.
4. Adhesiveness, large.
5. Combativeness, large.
6. Destructiveness, full.
7. Secretiveness rather large.
8. Acquisitiveness, rather large.
9. Constructiveness, rather large.
10. Self-Esteem, rather large.
11. Love of Approbation, rather large.
12. Cautiousness, rather large.
13. Benevolence, rather large.
14. Veneration, full.
15. Firmness, large.
16. Conscientiousness, rather large.
17. Hope, rather large.
18. Wonder, large.
19. Ideality, large.
20. Wit, rather large.
21. Imitation, large.
22. Individuality, large.
23. Form, rather large.
24. Size, rather large.
25. Weight, large.
26. Colouring, rather large.
27. Locality, full.
28. Number, rather large.
29. Order, full.
30. Eventuality, rather large.
31. Time, rather large.
32. Tune, rather large.
33. Language, rather large.
34. Comparison, rather full.
35. Causality, full.

being and acting which is essential to the social character and progressive improvement of man. Imitation to *that* extent, no one can doubt, is purely automatic—altogether independent of the will and the reason; and we have stated reasons for concluding, that the exercise of the power in its highest endowment, which ventriloquism undoubtedly is, may be in several essentials of its exercise not less involuntary. Dr Gall knew a deaf and dumb boy who had, from the moment he was received into an institution for the deaf and dumb, imitated every person he saw there, in a manner so exact, that each could be easily distinguished;—the gait and gestures of the director, the inspector, the surgeon, &c. were not to be mistaken. M. Pinel had a young female idiot under his care, who, he says, had the most resolved and irresistible propensity to imitate every thing that was done in her presence. "She repeats," says M. Pinel, "*automatically* all she hears said, and imitates the gestures and actions of others with the greatest accuracy, and without being at all embarrassed with respect for persons." *

Cabanis relates the history of a man so excitable (*si mobile*), that he felt himself impelled to repeat all the movements and attitudes which he witnessed. "If at any time they hindered him from obeying that *impulse*, either by constraining his limbs, or obliging him to assume contrary attitudes, he experienced insupportable anguish; here the faculty of imitation was aggravated to a degree of disease.†"

Dr Gall gives an account of a male idiot, in a madhouse, who was constantly occupied in *counterfeiting* the other patients. Dr G. found the organ large in players, and enumerates a great number of eminent actors in Germany, Holland, France, and England, in whom he had proved the fact; and he concludes, "that that faculty ought to constitute a *considerable portion* of the talent of an actor."‡ This limitation left Dr G. at liberty to add other faculties, which farther observation might shew him to be necessary

* De l'Alienation Mentale, 2d edit. p. 99.

† Du Physique et du Moral de l'Homme, t. i. p. 195. N. B.—Pinel and Cabanis were not phrenologists.

‡ Sur les Fonctions du Cerveau, tom. v. p. 330.

to the histrionic art. Mr Scott was the first to give to Secretiveness an equal rank, at least, with Imitation, in the endowment of an actor.* Of this combination Dr Gall had no suspicion when he composed his work above referred to; yet it is to us matter of fair analogical inference, that every one of the great actors whom he enumerates as being largely endowed with Imitation, must have possessed Secretiveness in at least an equal degree. None of the eminent actors at present on the British stage offers an exception. Dr G., in one or two instances, unconsciously relates circumstances from which it is clear that some of his examples were secretive as well as imitative persons. He told a robber, for example, whom he saw in the house of correction at Munich, on the strength of his organ of Imitation alone, that he was an actor. The man avowed that he had belonged to a company of strolling players, but had carefully *concealed* the fact, which was on that account utterly unknown in the establishment where Dr Gall found him. The following passage from Dr G.'s work † is another instance of his unconscious omission of the important element of Secretiveness :—

" I know many persons, especially women, who possess a talent for mimickry in a very high degree, and who are never so happy as when an opportunity occurs for them *to mask themselves*." Dr G. imputes in great painters the power of *expression* to Imitation, as he found Imitation largely developed in the busts of Raphael, Dominichino, Rubens, Poussin, and Lesueur; all particularly distinguished for power of expression. Mr Scott has demonstrated that, in the imitative arts, Imitation alone will not give that quality called expression, which is the result of Secretiveness. " Imitation," says he, " seems to give the power of copying the externals, but Secretiveness is necessary to give a life and soul to the performance." In what *manner* Secretiveness confers this power in the arts of painting and sculpture, Mr Scott does not, however, pretend fully to explain.

Dr Spurzheim, although he has not said so in any of his works, stated to us lately in conversation, that to mimickry, where acting or personating is necessary, Secretiveness is

* Phrenological Transactions, p. 165, 169. † Tom. v. p. 335.

essential. Dr Gall, when he published his great work, thought that Imitation alone constituted the talent of mimickry and personation.—Vol. v. p. 331. Dr G. does not fail to observe what he calls the *irresistible impulse* which supplies the stage with performers; and states, in confirmation, that almost all the great actors gave up other occupations for the theatre. Garrick left the counting-house of a merchant to join a company of strolling players. Lekain was originally a surgeon's instrument-maker. Clairon was a coach-maker; Moliere, the son of a *valet de chambre tapissier* of the king, and brought up to the same occupation, which he quitted, impelled by an irresistible passion for the stage; and Corneille was destined for the bar. In farther proof of this passion being the result of a primitive impulse, Dr G. adduces the curious though very common cases of infant performers, who astonish us with their theatrical powers, when they are not only uneducated, but have not nearly arrived at the maturity of their intellectual faculties. He mentions Henry West Betty, the famous Young Roscius; and we may add the still more wonderful Clara Fisher. Nothing short of an instinct, which, without the aid of reason, goes infallibly to its end, however arduous, can account for Clara Fisher's *former* performance of the character of Richard III. We say former; for, when we saw her last winter, her acting of that most difficult of parts was become a different and altogether inferior exhibition. Betty, too, is no Roscius as a man. If we were asked to account, on phrenological principles, for this falling off,—the too common fate of precocious talent, but most of all of the histrionic,—we should impute it to the joint effect of injury to the organs by premature exercise, and distraction of their formerly undistracted and instinctive application, by the exercise of other powers to which education is more immediately addressed.

What we have now and formerly said of the histrionic results of the combination of Imitation and Secretiveness, especially when operating by pure instinct at a very early age, is so satisfactorily confirmed by the case of Miss W., a very young lady whom we lately saw in London, that an account of it, we trust, will form an acceptable conclusion to this paper.

When visiting Mr and Mrs W., we were requested to look at the head of their eldest daughter, a child between ten and eleven years of age, and to say if we found in it an indication of talents or dispositions in any degree uncommon. In an admirable organization, both intellectual and moral,* and which we were right in predicating would give both excellent dispositions and abilities, Imitation and Secretiveness were too prominent to leave us for a moment in doubt as to the talent which must have most arrested the attention of her parents; and their surprise, in ignorance of the simple signs which we read, may be judged of, when we answered, that their daughter was a most perfect mimick and imitator; and, more particularly, that, if ever she had been in the theatre, her favourite imitations would be dramatic. Impatient to verify this piece of absolute sorcery, our friends desired their little girl to give us a specimen. With great readiness she took her station at the opposite end of the drawing-room, while her mother sat down to the piano-forte, and played a recitative prelude. This indicated that we were to transport ourselves to the Opera-house, and imagine the *Prima Donna* before us. The child was immediately in a series of the most graceful and impassioned attitudes in the high tragedy style, while she vented her feelings in corresponding strains of recitative, with words to suit, which we were some minutes before we discovered to be her own *imitation* of Italian,—of which language she knew not a word,—but which, in both sound and sense, would have been quite adequate

*1. Amativeness, rather large.
2. Philoprogenitiveness, large.
3. Concentrativeness, large.
4. Adhesiveness, rather large.
5. Combativeness, rather full.
6. Destructiveness, rather full.
7. Secretiveness, large.
8. Acquisitiveness, rather large.
9. Constructiveness, rather large.
10. Self-Esteem, mod. or rather full.
11. Love of Approbation, rather large.
12. Cautiousness, large.
13. Benevolence, large.
14. Veneration, moderate.
15. Firmness, large.
16. Conscientiousness, very large.
17. Hope, moderate.
18. Wonder, large.
19. Ideality, large.
20. Wit, rather large.
21. Imitation, very large.
22. Individuality, rather large.
23. Form, full.
24. Size, full, or rather large.
25. Weight, rather large.
26. Colouring, full.
27. Locality, full.
28. Number, rather large.
29. Order, large.
30. Eventuality, rather large.
31. Time, full.
32. Tune, rather full.
33. Language, rather large.
34. Comparison, large.
35. Causality, rather large.

to all the duty of the King's Theatre with nineteen-twentieths of the opera-goers. She advanced, knelt, wept, and supplicated,—then rapidly retreated, indignantly and hurriedly rejecting, as it were, some unwelcome and unworthy proffer ;—again advanced singing a bolder strain,* and assuming the towering attitude of command, while the *words* were all of the most magniloquent mouth-filling Italian. No practised actress could have exceeded this child in dignified, graceful, and altogether suitable attitudes and movements, or in better adaptation of the tones of voice to the passion meant to be portrayed. Suddenly she changed her character, and advanced with all the tripping liveliness of Allegro herself,—danced in the most attractive opera manner,—and executed, with uncommon ease and grace, the steps and attitudes, and even pirouettings, of the ballet. Her dancing, we were informed by her parents, had rather fallen off since she had been put into the hands of the dancing-master for more *regular* training.† Our juvenile performer had not confined herself to imitation of the Donnas and Figurantes of the Opera, for she now assumed the Buffo, and went through all the chatterings, and grimaces, and contortions, of that impressive person, in a very superior manner.

It was now time to ask how such an infant had come by all this, and we were informed that her operatic history was this :—She had, when scarcely nine years old, been one night taken to the Opera, and was observed to give a very steady and fixed attention to the whole performance. The impression was, however, never believed to be deep or lasting, as she said little about what she had seen, and for *four months* the Opera seemed to be forgotten, when it was reported from up-stairs that Miss W. had suddenly begun to *start* much, and throw her arms about, and mutter, and make faces, and speak "nonsense words," and dance oddly—the which was all of equally novel occurrence and bad example in the nursery, not to say that it moreover called in question the state of the wits of the said

* Her Tune was the only imperfect part of the exhibition, and the development of the organ we found to correspond.

† We were acquainted with a curious instance of the same thing in a child in Edinburgh ; indeed the result is to be looked for.

Miss W. When all this proved to be a wonderfully correct imitation of what the child had seen and heard at the Opera four months before, the astonishment of her parents may be imagined. They were tempted to take her to the Opera again, and when we saw her she had seen that performance three or four times.

Of this unaccountable interval of apparent meditative preparation, we have an instance from no less an authority than Plutarch. Plutarch relates, that a parrot belonging to a barber in Rome was remarkably talkative and amusing, and the neighbours used to gather round to hear its performances; till one day a procession happened to pass, accompanied with a band of music, trumpets, cymbals, and other noisy instruments, which so astonished the parrot, that he continued silent for the space of three days. The barber and his neighbours were lamenting the want of their ordinary amusement, and began to fear that the parrot would never speak again, when all on a sudden, at the end of the before-mentioned period, Poll broke out into a most correct imitation of the whole processional band, and gave the braying of the trumpets, the jingling of the cymbals, with drums and all other accompaniments, in grand style. Plutarch concludes, that during the period of silence, the bird had been employed in meditating, and preparing in his mind, the extraordinary exhibition which he afterwards made of his imitative powers.

Miss W.'s imitations were quite impartial. She had been present at a harvest-home, and had seen an Irish reaper and his daughter execute severally a pas-seul, in the form of a hornpipe or jig, in a highly-characteristic manner. She gave us the one after the other to the minutest inelegance which had been perpetrated; and it was quite evident throughout both movements to which of the two performers every step and hobble belonged. When the lady, she wrapt up a handkerchief into a globular form, which ever and anon she applied to the heated brow and importunate nose; and, although all present were moved to laughter, not the slightest external mark of it appeared on the features of this curious child. This we could only impute to the suppressing power of Secretiveness, for a very considerable development of the organ of Wit put insensibility to

the ludicrous in her quite out of the question. There is no emotion whose outward expression is more difficult of concealment than laughter; yet we all know the gravity with which players go through the most ludicrous scenes. Liston's solemnity, for example, which he generally pushes the length of an idiotical expression,* is in such monstrous incongruity with the matter he has in hand, that it often overcomes the gravity of the other performers, whose surrender is always a great additional amusement to the spectators. Liston's Secretiveness is uncommonly large.

Miss W. never witnessed the feats of a ventriloquist; but if she should, and should not produce the vocal illusion of ventriloquism as perfectly as she would imitate all the gestures and movements, we should seek the reason in her inferior endowment of Tune, without which, as we above observed, the distinctions of sounds are not sufficiently determined. She has every other faculty for the ventriloquial accomplishment in equal endowment with W. C. M. and M. Alexandre, with a reflecting development decidedly superior to that of either of them.

The above observations had just left our hands for the printer's, when we received a letter from Mr Scott himself, whom we have more than once quoted as having done so much to extend the range of Secretiveness, and who happened to be at the time travelling in England. Among other curious phrenological observations, he gives us the

* The unknown painter of Cuddie Headrigg before the Privy Council well knew pretended simplicity to be the last stronghold of Secretiveness.—See likewise the case of J. G. in the Phrenological Transactions, page 289, and of the Irish girl mentioned in our fifth number.

We have seldom seen a better secretive portrait than Wilkin Flammock, in the first tale of the Crusaders. His wily negociation with Jorworth, the Welsh envoy, is a *chef d'œuvre*. "'What will it avail you,' said Jorworth, 'to put us to the toil and trouble of a long siege when you can hope no rescue?'

"'And what will it avail me more,' said Wilkin, answering in his native language, and looking at the Welshman fixedly, yet with a countenance from which all expression seemed *studiously* banished, and which exhibited upon features otherwise tolerable, a remarkable compound of *dulness and simplicity;* 'what will it avail me whether your trouble be great or small?'

"'Come, friend Flammock,' said the Welshman, '*frame not thyself more unapprehensive* than Nature hath formed thee.'"

following communication from Cheltenham, which will speak for itself. Certainly it could not have come more perfectly *a-propos* :—

" There is another of his Majesty's liege subjects here at present worthy of remark in a phrenological view—a Master Joseph Burke, *aged six years*, who leads the band at the theatre in a long and intricate overture of Rossini's, plays the violin with very considerable power of expression and execution, and performs Lingo in ' The Agreeable Surprise,' Murtoch Delany in ' The Irishman in London,' and various other parts. I went on Tuesday night to see him, and, after the overture, he came into the box where I was sitting, along with his father and mother. He is one of the finest little fellows I ever saw ; not tall of his age—rather the reverse—*but with a head equal in size to that of most full-grown men.* The breadth above the ear is particularly great ; I should think it at least six inches ; and, in putting my hand to it, I found Secretiveness quite prominently large. The occipital region (Amativeness, Philoprogenitiveness, Concentrativeness, Adhesiveness, and Combativeness) is very full, and Firmness is also large ; but it was a large head every way. I could not see the forehead well on account of his hair, but I plainly saw that the lower part of his forehead was all full. His performance on the violin is wonderful certainly for so young a child ; but in musical precocity he has a rival in the Infant Lyra. His acting likewise has a parallel in Clara Fisher's ; but, as uniting the two talents, he must be allowed to be the greatest wonder of the three. His acting is remarkable for nothing so much as the *determined gravity* with which he keeps his countenance, while the whole audience, and even the actors themselves, are convulsed with laughter. When in Lingo he makes love to Cowslip the dairymaid, the actress who performed that character was quite unable to keep her countenance, when he was straddling up to a chair to seat himself beside her ; but all the time he never moved a muscle. This is an additional instance of Secretiveness being found in a talent for acting ; indeed I am more and more satisfied that it is one of the most essential ingredients of that talent.

" Master Burke, his mother informed us, is very fond of

drawing, and is also an excellent dancer; but in other matters, such as reading and general information, he is quite a child, and not more forward than other children of his age. He seems to have the best dispositions possible,—did every thing he was desired by his parents, and went to every body who wished to take notice of him with the utmost good humour. In short, I must end where I began with saying, he is one of the finest little fellows I ever saw."

PHRENOLOGY APPLIED TO CRITICISM IN THE FINE ARTS.*

We have in various instances endeavoured to shew the application of Phrenology to criticism in that department of literature which has relation to human character and manners; and we have given examples of this, both in the drama, in works of fictitious narrative, and in poetry. The science is equally capable of being applied to criticism in the imitative arts of painting and sculpture; indeed its use in these may be more easily apprehended by those who have not made any great progress in the study, than in the former. It requires a well-established and connected view of the system of mental philosophy founded on phrenology, to be able to see how it can be applied to illustrate the beauties of Shakespear or Fielding; but no depth of knowledge is requisite to perceive that if there be truth in the alleged correspondence between the form of the head and the character of the individual to whom it belongs, the artist who would exhibit a certain form of head in persons of a certain known character, must conform his representations to the system, otherwise they will be out of nature.

The ancient sculptors were accurate observers of nature; and to this accuracy, more than any thing else, is owing the extraordinary merit and beauty of their performances. Not to mention the statues of their gods, among whom Jupiter, the personification of the Supreme Intelligence, is conspicuous for the prominence of the upper part of the forehead, there is an evident difference between

* By George Combe.—Vol. ii. No. 6, p. 201.

their statues, busts, and cameos, representing sages, philosophers, and law-givers, and those of the warriors and victors in the Olympic and Isthmian games. The busts of the Twelve Cæsars, who, with a few exceptions, were among the most bloody and ferocious tyrants that ever disgraced humanity, correspond with this character in the most exact manner. Combativeness and Destructiveness, particularly the latter, appear in them developed in a remarkable degree. We have seen an antique cameo of the head of Nero, in which, even on a small scale, the organ of Destructiveness appears conspicuously prominent. If any doubt could occur as to the existence of that propensity in human nature, the history of this monster, who caused his own mother to be put to death, and for his amusement set fire to his own imperial city, must have decided the question for ever.

It has been objected to the famous Venus de Medicis, that the head is proportionally too small, so much so that, phrenologically speaking, it does not indicate even an ordinary degree of intellect. We believe it has been said, though we do not at present recollect the authority, that the head of that celebrated statue is modern; in which case the ancients stand absolved from the charge of this particular error. But, without taking this into consideration, the sculptor, whether an ancient or a modern, may perhaps be defended, even upon phrenological principles: for although the beauty of Venus is universally celebrated by the ancient poets, they say nothing of her *wisdom;* and we do not hear that any ancient sculptor has given a head of this description to a statue of Minerva.

Modern artists have been often too little attentive to truth of representation in the form of the head—and their blunders are often severely felt and deplored by phrenologists. In some cases, where the forehead has been remarkable as a feature in the physiognomy, it has been represented with tolerable accuracy, as we find it to be in that splendid bust of Lord Bacon at Cambridge, a copy of which forms one of the principal ornaments of the Phrenological Society's hall. But in other instances this has been much neglected,—and the whole attention has been directed to the less interesting and less instructive representation of the lower features. Scarcely in any case has a due regard

been bestowed on the form of the coronal, lateral, and posterior parts of the head, though so important in designating the character—but these have been left either to caprice, or to some fanciful rules of the picturesque or the beautiful. We have seen a copy of a bust of Pope, said to be by Rubilliac, in which so much brain is thrown behind the ears, that the individual represented, had he really possessed such a head, would have been the most brutal of mankind. We are told of an eminent living sculptor, that, in taking casts for the purpose of making a bust or statue, he never goes farther than the mere mask; and that, for the rest of the head, he has a general or average form, which is applied to every individual. This is a grievous error, and must entirely destroy the value of this gentleman's heads as representations of nature. He ought to reform his practice altogether.

To this general carelessness, however, there are some honourable exceptions; and we possess among ourselves an eminent sculptor,* whose accuracy in this respect is not inferior to the dignity, grace, and beauty with which he knows so well how to invest his figures. It has been well said of him, by a brother artist, that "he infuses phrenology into marble." His studio is a treat to a well-informed phrenologist; and the study of his heads is only less instructive than the observation of Nature herself, in all the endless varieties which she daily presents to us.

We have also another artist,† and in another department of art, whom we are proud to own as a native of our northern metropolis. His pictures of the Cossack Banditti, the Circassian Captives, the Interview of John Knox with Queen Mary, and the Murder of Archbishop Sharpe, have been much and deservedly admired in themselves, and in the accurate and beautiful engravings which have been made from three of them by another native artist of great merit, and a zealous phrenologist, Mr James Stewart. We notice them here for the purpose of stating, that Mr Allan is not more accurate in his costumes, and in the admirable character and expression of his countenances, than in his attention to the characteristic forms of his heads, which are, generally speaking, phrenologically correct. In his Banditti, the low forehead is combined with a great develop-

* Mr Joseph. † Mr Allan.

ment of the inferior lateral parts of the head, indicating a predominance of Acquisitiveness and Destructiveness, and of the lower propensities in general, with a deficiency in intellectual and moral endowment. In the picture of the Captives, the superiority of the heads of the Circassians (a free people, of the Caucasian race,) over those of the despot and his attendant slaves, is quite evidently marked. The heads of the latter are represented, what they doubtless would be found in nature, small and round, narrow in the region of the intellectual organs, greatly defective in Benevolence, and large at Amativeness. The head of the male Circassian is decidedly larger than any of these, and in its form approaches to that of the European nations; while those of the females possess the same character, only of a smaller size. Both the Turkish and Circassian heads correspond remarkably with the specimens of the crania of these nations in the collection of the Phrenological Society.

In the historical picture of the murder of Sharpe, Mr Allan is no less true to nature. No one can look at the large well-developed heads which he has there given to the Covenanters, without being struck with the extraordinary differences between them and the Russian banditti, on the one hand, and the narrow contracted heads of the Turkish slaves, or the more favourable but still inferior development of the Circassians, on the other. In Burleigh, and the other misguided perpetrators of this cruel act, we see broad and well-developed foreheads, with a large and round coronal surface, indicating great Firmness, Conscientiousness, Veneration, Hope, and even Benevolence, joined to a considerable Combativeness and Destructiveness. No one need imagine that the former description of qualities is inconsistent with the act which they are employed in committing, as their creed would point out to them that, in putting the oppressor of their brethren to death, they were doing God service. Hackstoun of Rathillet, who was by, and took no part in the murder, and who is represented in the picture as sitting on horseback, hiding part of his face with his cloak, has not only less expression of courage and determination in his countenance, but the painter has given him a head decidedly smaller and narrower than to the more active conspirators. We know not if this has been done

intentionally; but it corresponds precisely with the character. In another picture recently finished, and which is now exhibiting in this city—Queen Mary signing the Resignation of her Crown and Kingdom,—the same minute attention to phrenological truth is observable. In the Queen, the high and polished but slightly retreating forehead, of elegant form and proportion, is correctly indicative of her acute and penetrating but showy and superficial intellect. Her cap is raised on the left side, and under it the region of Ideality appears well developed. This is probably copied from authentic portraits, and it corresponds well with the character. In the Lord Lindsay, the figure second in historical importance, but, in point of pictorial effect, perhaps the first, the general character of the head is like that of the Covenanters;—in the region of the intellect it is, perhaps, better developed than was likely to be the case in a nobleman of that age—of a character so rude and uncultivated as that of Lindsay. The firmness and power of character, indicated by the height and general size of the head, accords well with the eager grasp with which he holds the arm of the Queen in his mailed hand, and the determination of his look and attitude in presenting to her the pen with which she is to sign the renunciation of her royal estate and title. The other nobleman appears shocked at this rudeness, and seems to remonstrate with Lindsay, and to suggest a gentler mode of treatment; and his head, as well as his countenance, indicates a milder and less determined character.

PHRENOLOGICAL EXPERIMENT.*

CHATHAM, *January* 6. 1827.

SIR,—I have the honour to belong to a literary society in this place, the members of which are much divided on the subject of phrenology. In a late debate I ventured to assert, that if a skull was forwarded for the consideration of the Society of which you are the distinguished President, I had no doubt they would be able to detail the character of the individual to whom it belonged. It was agreed that

* Communicated by Dr Elliotson of London.—Vol. iv. No. 14. p. 258.

I should do so by this day's coach. I have directed to you the skull of a person with whose previous history they are acquainted.

May I beg you to submit the said skull to the investigation of the Society, and to favour me with the opinion they entertain of its development. On receiving the same I shall in return forward you the history of the subject to whom the skull belonged. The Society is at liberty to take a cast of the skull: I beg the original may be returned to me. Requesting your indulgence for an intrusion which has the promotion of the science for its only object, I am, Sir, your most obedient servant, A. R.

Dr Elliotson, President of the London
Phrenological Society.

To A. R., Esq., Surgeon, Chatham.

Sir,—I exhibited the skull, with which you favoured me, to the London Phrenological Society at their last meeting, and we were all perfectly agreed upon the character of its original possessor. The Society, however, never delivers a judgment upon character on any phrenological point; but, when an opinion is desired, leaves any member, or private individual, who may think proper, to do so.

I take it for granted, that the deceased was of sound mind; but, to be accurate, we should likewise know how far he had been educated, and whether his constitution was active or indolent.

Ignorant of these particulars, I should say, that he was a man of excessively strong passions,—that these were far an overbalance for his intellect,—that he was prone to *great violence*, but *by no means courageous*,—that he was *extremely cautious and sly*, and fond of *getting*—his *sexual desires* must have been strong, but *his love of offspring* very remarkable. I can discover no good quality about him, except the love of his children, if he had any. The most striking *intellectual* quality in him, I should think, was his *wit*. This must have been not only great, but probably of a dry cast. He might also have been a good mimic.—I have the honour to remain your obedient humble servant, John Elliotson.

Grafton Street, London, *January* 29. 1827.

To Dr Elliotson.

Chatham, *February* 3. 1827.

Sir,—I had the honour to receive your letter of the 29th ultimo, and much regret that I was unable to forward my notes of the individual, whose skull you did me the favour to examine, at the date you requested; they will, however, reach you before the next meeting of the Society. In the mean time, I can assure you, that your explanation of his character is *singularly correct* in every particular, affording a new and powerful proof of the truth of Phrenology.

There are, however, some gentlemen unable to overturn the facts of the case, who now turn round and say, that between the period of receiving my communication (6th January last), and your answer, there was ample time for you to inquire and find out that I had the medical charge of the convicts at this place; that you would naturally suppose that this was the skull of a felon; and that you could not err much if you ventured to assign to his character all the baser passions. There is only one mode of replying to such opponents, namely, by a straight-forward question and answer between us. And, *first*, until the receipt of this letter, had you knowledge of my public professional employment? *Secondly*, Is your detail of this felon's character drawn solely and entirely from the shape of the skull? *Thirdly*, Had you any previous information whatever as to his past life, habits, or education?

The answer which I anticipate to these questions will, I doubt not, afford us matter of triumph.

I have the honour to be, Sir, your obliged servant,

A. R.

I beg the favour of an early answer. The lower jaw-bone was not in the box. I am in hopes to be able to present the skull to the P. S. It had better, therefore, not be lost.

To A. R., Esq.

Sir,—I beg to assure you that I drew my conclusions as to the character of the individual *solely* from the size of the various parts of the skull; and that, up to the moment of receiving your letter yesterday, I was totally uninformed respecting him, and indeed respecting yourself,

except that it appeared from your letter and your card, that your name was R., and that you were a surgeon at Chatham. I was ignorant of the existence of convicts at Chatham, and had had no communication with any person upon any particular in the matter, nor indeed considered any circumstance for an instant, except the character of the skull.

The delay in returning both it and my answer arose from the circumstance of the box arriving the day after the meeting of our Phrenological Society, to which you requested me to show the skull, so that a fortnight elapsed before I could execute your wishes; and when I did so, of a member requesting the loan of it to make a cast, and detaining it nearly a fortnight. But for this I would have returned it the same day; for an examination of five minutes would have been amply sufficient to enable me to draw the conclusions I sent you.

The suggestion, that I had gained some knowledge privately of the individual, or had taken a hint from any circumstance whatever, might have annoyed me, were I not unknown to the gentlemen, were I not conscious of detesting every species of duplicity, and were there not something irresistibly laughable in seeing the plain facts of phrenology give one such power as to produce an astonishment in the minds of those ignorant of them, not dissimilar from that which a little chemical or physical knowledge excited in times of darkness. In those days the power of knowledge was ascribed to the devil; at the present time, such agency being universally disbelieved, the manifestation of power is pronounced a deception. The phrenologist, conscious of the truth, views the incredulity of the world as a correct measure of the magnitude of his science.

Some gentlemen do not believe I could have drawn so correct a character from examining the skull; but they will cease to wonder, if they find that they themselves can with perfect ease do exactly the converse—pronounce upon the size of the various parts of the skull from their knowledge of the individual. If they know the individual to have been prone to acts of violence, they may assert, that the skull should be very large at the organs of Destructiveness; if very cautious, very large at the organs of Cautiousness; if very fond of children, very large at the organs

of Philoprogenitiveness, &c. In Mr G. Combe's excellent *Elements of Phrenology*, the average measurement of twenty heads in several points is given. The average breadth at Destructiveness is $5\frac{1}{2}\frac{9}{0}$ inches; at Cautiousness $5\frac{1}{2}\frac{4}{0}$ inches; the average length from the meatus auditorius externus to Philoprogenitiveness $4\frac{7}{8}$ inches. These were taken from heads *covered with integuments*, and, moreover, above the common average, because among these twenty were several large heads, and not one small. Yet similar measurements on this *bare* skull will be found, $5\frac{7}{8}$—$5\frac{7}{8}$—$4\frac{7}{8}$.

Allow me earnestly to recommend to the members of your Society Gall's *Fonctions du Cerveau*. It is worth all the other works on phrenology together, and full of splendid truths for the metaphysician, the moralist, and the legislator, no less than for the physician and the physiologist. I have the honour to remain your obedient humble servant,

JOHN ELLIOTSON.

GRAFTON STREET, LONDON, *February* 8, 1827.

P. S.—You will oblige me by sending, with the history of the individual, a copy of my former letter, as it was hastily written, and I have no notes of it. The lower jaw was forgotten, but is safe.

Account of J. L.

J—— L—— was received into the Dolphin convict-hulk at Chatham in February 1824, from C——e, under sentence of transportation for life. He was in person tall and athletic, with a fine erect carriage, and a stern unbending countenance. He was born of respectable parents at M——, and all his relations were of the class of yeomen. His education, however, was limited to reading and writing. During his early life he evinced an ardent attachment to every species of vulgar sensual enjoyment; the alehouse, games of chance, and particularly cock-fighting: of this worst species of gambling he was for years the noted and well-known supporter. He was also an active poacher, but only of that class denominated hare-panyers or snarers. At the period of manhood his friends, in the hope of reformation, placed him in a small farm. The vicious habits of a previously bad life, however, were not be thrown off in a

moment, nor was the monotony of farming calculated to efface the vivid impressions of a dissipated youth. On the contrary, being now his own master, his first consideration was how they could be extended. Accordingly, he is reported at this period to have sunk lower in the paths of depravity, and to have formed an intimacy with persons which gave a permanent and deeper shade to his character. Living in the vicinity of the most extensive salt-works in the kingdom, he with them resolved on the formation of a band of smugglers for the plunder of that article, and the sale of it throughout Cheshire, Lancashire, and North Wales. Under this man's direction and command they pursued this occupation for a long time without the sufferers being able to detect them; and even when he became suspected by the police and excise, he continued to elude their vigilance, till, the *duties* being removed, it ceased to be an object of contraband commerce.

If, at the age of twenty, he did not return to the paths of rectitude, it might have been expected that maturer years and the influence of a wife and children would have quieted his evil habits; but, these strengthened with time and by long indulgence, he was now as restless as at the moment of their first impulse. With some of the remains of his former associates, therefore, he now commenced plundering of grain,—an article not easily identified if once fairly removed from the premises. This was sometimes carried to his own farm, (which, it is worthy of remark, he still held at the time of his conviction,) and sometimes direct to the market-place. In this nefarious scheme, however, he was soon detected. In an attempt to plunder a neighbouring farmer, his gang were surprised; they fled to the road, where he was in waiting with their horses, and all escaped, except himself and one companion. They were tried and sentenced to death; but which sentence was ultimately transmuted into transportation for life.

Such are the general features in the history of a man who was distinguished by the familiar nickname of Jack Turpin; and in contemplating the variety of scenes, and the many singular adventures, into which it must have thrown him, it becomes a matter of extreme regret that we are not in possession of the knowledge of many particular acts committed by him. Using his gang as servants to his

will, he more frequently directed than acted with them. The disposal of his spoil being his chief concern, he had often distant journeys to perform in order to arrange with the purchasers; so that, though the connexion between them was close and intimate, still it had on his part much mystery attached to it. This he maintained even at the bar of justice, and though, after his conviction, an hundred guineas were offered him for a detail of the adventures of his life, he rejected the bribe with scorn. After sentence of death was pronounced, he was seized with an alarming illness, which continued for five months, and being apparently on the verge of eternity, he still kept the same reserve as to the minute details of his life. On his recovery he was removed to the convict-hulk, with the view of being conveyed to New South Wales; but his age being deemed too advanced for the voyage, he was detained to labour at the public works. Here he was orderly, obedient, and respectful to his superiors; but towards his fellow-prisoners he was, with one exception, reserved, keeping them at an immeasurable distance. In May 1826, his infirmities increasing on him, he was removed to the hospital-ship. Here, by an unvarying system of kindness, the stateliness of his mind unbent so as to induce him to exercise more familiarity; still, however, with the same guarded avowal as to facts, with the following solitary exceptions:—

1st, That though he had led a lawless life, he had never committed murder.

2dly, That by his wife he had eight children; that he had also a natural son in North Wales, and he had kept several women in different parts, and at different times, up to the period of his apprehension.

To this scanty detail of facts it only remains to add the manifestations of character he exhibited after he had become familiar with the patients of the hospital.

In the first place, he exhibited a severe sarcastic wit at the expense of those around him. The manners and language of the kind and benevolent clergyman who officiates at the hospital were the frequent subjects of his mimickry.

In the second place, he exhibited a strong attachment to his children. He frequently spoke of them in the most affectionate manner, and made his last moments respecta-

ble by directing them to the disposal of his property among them.

In the third place, he possessed a firm disbelief in the existence of a Deity and of a state of future rewards and punishments, and sunk into eternity avowing his disbelief.

A. R.

CHATHAM, *February* 14. 1827.

To Dr ELLIOTSON.

SIR,—At the meeting of the Rochester Literary Club, the enclosed resolutions were (on the motion of the Rev. Dr Joynes) unanimously adopted, and, by their direction, I have the honour to forward you the same. Permit me to add the high gratification I feel in being entrusted with the present communication. With great personal esteem, I have the honour to be, Sir, your very obedient servant,

A. R.

CHATHAM, *February* 20. 1827.

Resolutions passed at a Meeting of the Rochester Literary Club, held on Thursday, February 15. 1827.

Mr R. having introduced the subject of Phrenology, by an interesting correspondence between himself and Dr Elliotson, the President of the London Phrenological Society, upon the skull of J. L., it was continued by other members till the usual hour of adjournment, when the following resolutions were passed unanimously:—

1st, That the character given of L. by Dr Elliotson, from the inspection of the skull, corresponds so exactly with his history, that it is impossible to consider the coincidence as the effect of chance, but that it is an instance which, if supported by many others, affords a strong foundation for the truth of Phrenology.

2d, That a copy of the above resolution be forwarded to Dr Elliotson, with the thanks of the Club for his communication, and that Mr R. be requested to transmit the same.

H. P. *Secretary.*

DR THOMAS'S THEORY OF THE TEMPERAMENTS.*

In all ages mankind have been struck by the diversities of character and of activity that accompanied, and were by many supposed to depend on, differences of temperament or natural constitution of the body. So far back as the time of Hippocrates, we find a classification of temperaments into four great divisions, which, more or less modified, have since been often set aside and often reproduced; but up to the present day, notwithstanding the most laborious inquiries of physicians, physiologists, and philosophers, we remain almost as ignorant as ever of the physical causes on which these varieties depend, of the phenomena by which they may be accurately distinguished, and of the circumstances by which they may be modified and controlled; and thus it may be truly said, that a rational, useful, and consistent theory of the temperaments is yet only in expectation.

An approach to a better system has, however, been lately made by a French physician, Dr F. Thomas; and whether he be correct or not in all his facts and conclusions, it is impossible, we think, to read the exposition contained in the work now before us without admitting, that, in principle, in simplicity, and in practical usefulness, his doctrine excels all that have preceded it; and that, whatever may be its ultimate fate, Dr T. has succeeded in making at least one step in advance in a difficult and intricate path; and that on that account he deserves the thanks and the candid attention of the public.

On looking at the animal system, says Dr T., we find it to consist of three great groups of organs, each group performing distinct functions, but all the parts of each so far analogous as to contribute to one general end. The first group is that contained in the cavity of the cranium, and the general function which it performs is to carry on, or rather to manifest, all the operations of the mind, to constitute the seat of sensation, and to supply nervous energy to, and to direct the movements of, all parts of the body.

* Physiologie des Temperamens ou Constitutions, &c.; par F. Thomas, D. M. P.; Paris, 1826.—Phren. Jour., vol. iv. No. 15, p. 438. By Andrew Combe, M. D.

It is composed of many distinct parts, performing as many distinct functions; but all these, from a general similarity, may be regarded as belonging to the same genus, and may therefore be classed together. The second group is that contained in the cavity of the thorax, and it includes chiefly the lungs and the heart, having for their functions the processes of sanguification and circulation, which also have a general resemblance in their object. The third group is that contained in the cavity of the abdomen, including the stomach, liver, spleen, bowels, &c.; each also differing from the other, but all concurring to effect the conversion of food into chyle, and the separation and excretion of the superfluous or injurious particles from the system.

All other parts of the body—the limbs, and the parietes of the head, thorax, and abdomen—are evidently the mere passive instruments or defences of these more important animal functions. The head, thorax, and abdomen, form, in fact, what is properly called the animal, while the extremities may be wanting without diminishing the individuality of a living being. From this we come to the natural conclusion, that whatever a temperament or constitution may be in itself, the causes which give rise to it must exist in one or other or all of these three great groups of organs. And, accordingly, this inference of reason is amply borne out by observation, in a way that we shall now try to explain.

When an important natural truth is brought fully to light, it is astonishing how many, how easy, and how fruitful, are the applications of which it is susceptible. In our last Number, we were at some pains to shew that the phrenological principle of organic size being, *cæteris paribus*, a measure of functional power, so far from being either a fancy of a heated imagination, or peculiar to the brain alone, was, on the contrary, a universal law, extending over every created object, animate or inanimate. And now Dr Thomas comes before the public with a new and distinct application of this very principle, and not only demonstrates its universal prevalence, but, by its means, elicits many other important truths, and shows that differences of constitution or temperament depend on the predominance in development of one or more of the three great cavities relatively to the others, and on the consequent predominance of the class of functions which its organs perform.

By phrenological readers, Dr Thomas's fundamental principle of size being an element of power, will be readily received; but as this extended application of it is new, and as, on account of its favouring "the fantastical nonsense of Gall and Spurzheim," it is not in general repute among professors and established teachers, Dr T. wisely sets about proving it, as if it had never been heard of before. Nevertheless he is actually praised by our most inveterate (we are sorry that we cannot say most able) medical opponent, for not lending *any countenance* to the phrenological doctrines. Of the simplicity of this opponent, our readers will judge, when they are informed, that Dr Thomas begins by expressing *his astonishment* that any one should still be required to *prove* so self-evident and so palpable a proposition, as that size in an organ is a measure of power in its functions, and particularly that, now when it is plainly stated, any one should be found ignorant enough seriously to contest its truth. In endeavouring to find out why so plain a truth should have remained so long unknown, Dr T. states, that, perhaps, the most powerful reason was the false idea entertained of the force or energy of an organ. "*Promptitude and facility of action*," says he, "*were generally confounded with force and energy*, without attending to the fact that, most generally, these two dispositions are not even indications of force; for it is not, for example, those in whom the pulsations of the heart *are most frequent*, and the motions of the limbs *most prompt and easy*, who have the heart and muscles *most robust and powerful:* the contrary is even observed on comparing the child and the female with adult man; and the observation is, besides, applicable to all the organs, to the brain, to the stomach, &c. But it is *the degree of complement of the function* which constitutes *the degree of energy of the organ which executes it;* and to understand *this degree of complement* of action, we must bear in mind, that every organ has its own particular and distinct mode of energy, according to its structure and relations with other organs; that the brain is energetic when it perceives, remembers, compares, and wills strongly, or when the intelligence is powerfully developed, and the passions strong; the lungs, when they are the seat of a complete and abundant sanguification; the

heart, when it precipitates with force a large quantity of blood into all the vessels which issue from it; and the digestive organs, when they form and separate much chyle." P. 86. This, we think, is a pretty clear exposition of the distinction between power and activity, to come from one who is praised and esteemed by those who continue to confound them together.

Having established the general truth, that the relative size of an organ indicates the relative energy of its function, Dr Thomas begins with its particular applications, and, first, to the brain, in which he shows (as we did in our last Number) that all the methods hitherto tried for discovering the functions of the brain, take for granted, that size is, *cæteris paribus*, an accurate measure of energy of function. But here we need not follow him, except to subjoin a very important observation which is not always kept in mind as it ought to be. In answering some objections, he says: "Although the structure and complication of the brain be variable in individuals of very different species, the mode of application of our principle is not at all affected, because it is applied only to the same individual, to individuals of the same species, and to those of species so little different, that the structure and complication of the organs are almost the same.

"Thus, for example, if certain animals, monkeys, little birds, and mice, have a cerebral predominance equally marked with that of man,* the great differences in the organization of their brain give to that predominance very different effects. The ganglions of intellect and of the passions, so developed and so predominant in man, have either no, or very small, convolutions in these animals; they are only slightly developed, and their anterior, superior, and lateral regions seem to be entirely wanting; while, on the other hand, the ganglions which correspond to the nerves of the senses, and of all the body, are very voluminous; the eminences, nates, and testes, which are the principal ganglions of the optic nerves, form the greatest part of the

* "The cerebral organs, which in animals are an assemblage of a great number of separate and very distinct ganglions, appear in man to be formed only of two (the brain and cerebellum), which envelope the ganglia of the senses so much as scarcely to allow them to be seen."

brain in birds, and the olfactory and auditory ganglions form the greatest part of that of the smaller mammalia. It results from these organic dispositions, that animals experience certain sensations more energetically than man, but that their sensations are fugitive, and can neither be combined nor enlarged as in man; so that we may conceive how much the effects of cerebral predominance ought to vary in the different species of animals; since, in some, it indicates only extreme general sensibility; in others, the great delicacy of one or several senses; and in others, again, the great energy of several faculties or passions. Let us add, that, in individuals of the same species, where the structure and complication of the brain are always the same, those in whom that organ is predominant have more intellect and passions than others. So that our principles are rigorously applicable to the brain, and we can establish, without fear of being refuted by observation, that, in the same individual, the more the brain predominates by its volume over the other organs, the more will the faculties and passions be energetic relatively to the other functions." P. 93. The differences here noticed in the constituent parts of the brains of animals of different species explain many things to which we cannot now allude, but which often present themselves to our observation. Let it still be remembered, that the author from whom we quote is praised by our most inveterate medical adversary for his talent and accuracy.

Dr Thomas proceeds to examine the thoracic organs, &c., and states, that when the lungs are relatively large and spacious, the numerous cells of which they are composed place a large quantity of air in contact with a great quantity of blood, from which results a complete and abundant sanguification; and that, in like manner, when the heart is voluminous and robust, the circulation is active in all its parts; and, from these united, great animal heat, spread equally over the body, is the consequence, and *vice versa*.

In infancy and in females, the thoracic organs are little developed relatively to those of the head and abdomen; in them also the blood is more serous, the pulse softer, and the animal heat less high than in the adult, and especially the athletic, in whom the blood is fibrinous and abundant, the pulse full and strong, and the animal heat considerable.

In equal accordance we find the thoracic organs in the lowest state of perfection in cold-blooded animals; while in birds we find the lungs and heart most amply developed, and the cells of the former extending to, or rather communicating with, the interior of the bones; and this formation is in many accompanied by a higher temperature than is to be found in any other animal. Hence Dr T. regards it as established, that the more voluminous and the more developed the thorax relatively to the rest of the body, the functions of the heart and lungs are more energetic relatively to other functions.

The same thing happens with the abdomen. In the lowest animals, as worms and the zoophytes, the abdomen constitutes the whole animal. In insects, a nervous centre and a respiratory and circulating apparatus are added, but the abdomen still greatly preponderates. In reptiles and fishes the proportion becomes smaller; and in birds and the mammalia the abdomen becomes relatively still smaller, and its functions less important.

The energy of the digestive organs must be measured by the extent to which they perform their real function. We must calculate how much *they digest and convert into chyle*, and not how much is eaten. This distinction is particularly necessary, because we often see persons eat a great deal who form little chyle, and others eat little, and form much chyle.

Herbivorous animals eat little, but often; and their abdominal organs are large and greatly developed, and in a continual state of activity. They form chyle in abundance, and hence their natural fatness. Carnivorous animals, again, which are forced to seek their food, eat rarely and in larger quantity, and exercise their thoracic organs much more than their abdominal. Accordingly, they have capacious chests and small bellies, and hence their vigour and comparative leanness. Men in whom the abdomen is predominant, or feeble, approach to the two extremes. Abdominal men eat little at a time, but often; they digest continually, and sleep much, and their sleep is soft and tranquil like that of the herbivori; while, on the contrary, those in whom the abdominal organs are moderately developed relatively to those of the head and thorax, eat with avidity, and appear, like the carnivorous animals, to *devour*

their food; but their digestion is imperfect, and they remain dry and thin in spite of the aliment which they consume.

Having established the influence of organic size on energy of function, and pointed out the respective uses of the three great classes of organs, Dr Thomas next shows, that, during life, the size and configuration of the parietes or walls of the three great cavities, afford an accurate index of the size and form of the contained organs. He devotes some pages to prove that, generally speaking, the skull takes its form from, and indicates the shape and size of, the brain, and he refers to anatomical inspection for the evidence. He mentions some sources of mistake, and adds, "3*dly*, That the skull in children is thinner than in old age, as, generally, it then becomes thicker from the diminution of the size of the brain. 4*th*, The thickness of the bones of the skull is also variable in every individual, without regard to the age; but in general it bears a relation to the other bones; so that, the volume of those of the limbs or of the face being given, we know the thickness of those of the skull: of this I have satisfied myself by a great number of dissections of subjects differing in the degree of development of the osseous system. 5*th*, The *development of the frontal sinuses and of the orbitar cavities is never sufficiently great to cause errors of any magnitude.*" These observations also are pretty phrenological to come from a writer who has received the praises of our medical opponents.

That the form and size of the thorax and abdomen indicate with equal certainty the form and dimensions of their contained organs, is abundantly well established by Dr Thomas; but want of room obliges us to take this part for granted, and to hasten to the application of these preliminary and fundamental truths to the elucidation of the temperaments.

From what precedes, our readers will easily perceive that temperaments are considered by Dr Thomas as "varieties in man and animals resulting from different proportions of the three great visceral cavities." He divides them into seven kinds: 1. the mixed, in which the cavities bear an exact proportion to each other; 2. the cranial, or rather, we should say, the encephalic; 3. the thoracic; 4. the abdominal;

5. the encephalo-thoracic; 6. the encephalo-abdominal; and, 7. the thoracico-abdominal. In describing each of these, Dr Thomas takes, of course, a broadly-marked type.

1. The mixed temperament. Every body can tell in a moment whether the head, the chest, and the abdomen, are well proportioned. In this division individuals apparently very dissimilar are classed. They may be tall or short, stout or thin, beautiful or ugly; but they all agree in having a just proportion in the volume and energy of the encephalic, thoracic, and abdominal organs. This is the essential character of this temperament.

"The Apollo Belvidere," says Dr Thomas, "the immortal work of the Greek chisel, is a beautiful variety of the mixed constitution; for not only does none of the three cavities predominate, but there is a just proportion in the limbs as compared with the rest of the body and with each other; and the bones, muscles, blood-vessels, nerves, cellular tissue, and all the secondary parts, are also in beautiful proportion. This *chef d'œuvre* of art represents man in his most perfect type; there is nothing too strong and nothing too weak; nothing in excess and nothing deficient. Phidias, inspired, has created something celestial!—that brain cannot be the seat of too violent or too impetuous passions, although it can experience them all. The intellectual faculties, sufficiently developed, do not hurry him on to the vagueness of hypotheses and conjectures; his blood is neither too fibrinous nor too much animalized; his abdominal functions are performed with facility; the chyle is separated and absorbed in sufficient quantity for the nutrition of his beautiful body; the limbs have all that is required for exercising with the greatest facility all the movements necessary to the whole; and the physiognomy represents in all its features that perfect equality of the whole body."

Some modern painters, continues Dr Thomas, have given to their Apollo the attitude, the majesty, and the beautiful proportions of the limbs of the Apollo Belvidere; but they have diminished the abdomen a little, and enlarged the head and thorax, producing a figure which represents a higher moral and physical force than the original possessed, but without its harmony, health, and beauty.

The mixed temperament is common in France, and is often met with from twenty to forty-five years of age. It

is attended with enjoyment of existence, and with general good health; and it is, up to a certain limit, fit for every kind of exercise.

2. The cranial or encephalic temperament is distinguished by the relatively large head, open facial angle, moderately developed thorax and abdomen, and spare form; denoting great energy of passion, sentiment, and intellect, with less thoracic and abdominal activity. This variety, according to Dr Thomas, is found highly developed in those great men who have rendered themselves illustrious either by their talents, their virtues, or their vices; viz. in the cruelest tyrants, chiefs of sects, great authors, Cataline, Tiberius, Brutus, Aristotle, Cicero, Pascal, Pope, Tasso, Molière, Voltaire, Rousseau, &c., all of whom, according to their historians, were meagre and spare, and remarkable for the predominance of the encephalic over the thoracic and abdominal organs.

When this temperament is strongly marked, it is rare that the thorax and abdomen also are much developed; for then it would require a truly enormous encephalon to predominate. Accordingly, the decidedly encephalic are rarely robust and vigorous, or their digestion good. This constitution of body is most frequent between seven years of age and thirty. In Pericles it was so strongly marked, that Plutarch says, "Sometimes he was to be seen sitting in the street, *fatigued by the weight of his head*, and not knowing what part to take in the disorders of the state; and at other times thunder and lightning issued from his monstrous head with a tremendous noise." It is known that his head was, in fact, so much out of proportion to an otherwise handsome body, that the sculptors always represented it covered with a casque.

It is in this class of constitutions that we find men fitted for great deeds, and who raise themselves to eminence and renown in spite of every disadvantage. But, says Dr T., we must not confound the essential with the occasional, and suppose that the encephalic are always remarkable for great or noble pursuits. They may predominate either in intellect, in propensity, or in sentiment; but although the particular character will then be different, the essential always remains, that mental energy of some kind will show itself. Thus, one individual with a very powerful cerebral

organization will pass his days and nights, and employ all his faculties and passions, on things of little importance; he will reason continually, cry, agitate, and write against his brethren; while another engaged in commerce will expend all his energy on details; but both will be remarkable for energy, and the difference will be merely, that it is energy directed to different objects. If Dr Thomas had been a phrenologist he would have added, that the direction of the mental energy would depend on the part of the brain that was most predominant in relation to the other parts.

The encephalic temperament is much more frequent in the male than in the female; it is more common in free countries, and in those long agitated by political dissension, such as England, Germany, Switzerland, France, and Spain, than in those long bent under the yoke of despotism. It is more common in large towns than in the country; among artists, and among the scientific and educated, than among the idle and the labourer.

3. The thoracic temperament is characterized by a small head and a limited abdomen, contrasting with a voluminous and powerful chest. The Farnese Hercules is the beau ideal of this class; and it is not indifferently represented in porters, bakers, ploughmen, and other men employed in the severer kinds of bodily labour. It is about puberty that the thoracic organs begin to increase considerably. The thoracic constitution fits a man for fatigue and labour, and is seen in boxers in great perfection. Health with this temperament is robust, and diseases are inflammatory.

4. The abdominal is easily recognised by the large protuberant abdomen, broad pelvis, and abundant development of the cellular substance over the whole body and limbs. Chyle is formed in large quantity, and transformed into fat. The individual is slow in his movements, and his strength and mind are concentrated in his abdomen; *latamque trahens inglorius alvum*, he eats, drinks, and sleeps alternately.

When an individual originally encephalic passes into the abdominal, he preserves something of his original state. This variety is more frequent in large towns than in the country, and in Germany, Holland, and England, than in France.

5. The cranio-thoracic is known by the head and chest

being relatively much larger than the abdomen, and by its powerful dense muscles, and moral and physical force.

6. The cranio-abdominal presents the head and abdomen largely developed, and a chest small and contracted. The muscles are moderate in size, and plentifully interspersed with cellular substance, whence arise the rounded form and softness of the female.

7. The thoracico-abdominal presents the small head and ample thorax and abdomen, with large muscles, bones, and cellular membrane. It is well fitted for patient endurance of fatigue. It is more frequent in Asia and Africa than in America or Europe.

Such are the chief varieties of the temperaments, and such the physical marks by which they may be distinguished; but in many cases, says Dr Thomas, we require to look only at the face to discover the constitution. The forehead indicates the proportion of the encephalon; the part between the forehead and mouth is in general in harmony with the development of the thorax; and the lower part, including the mouth, chin, and inferior portion of the cheeks, is in relation with that of the abdominal organs; and hence the relative proportion of these parts to each other serves as an index to the particular temperament.

Having now pointed out the chief differences of natural constitution, let us inquire how far the classification at which we have arrived coincides with the phenomena.

In infancy and childhood we observe a manifest predominance of the encephalon and abdomen, with a small and narrow thorax. In accordance with this, we observe the healthy child display, relatively speaking, astonishing energy of passion, and greater power of seeking and acquiring knowledge, than is found at any other period of life. We find it also restless and mobile, and in constant pursuit of variety to gratify a number of faculties. Looking next to the abdominal development, we find the child not only eating often and much, but digesting vigorously, and deriving strength and nourishment from its food. Hence the diseases of infancy are almost peculiar to these two groups of organs, viz. convulsions and inflammations of the brain or its membranes, epilepsy, affections of the bowels, worms, diarrhœa, tympanites, &c.

In youth general growth takes place, and shortly the

thorax begins to enlarge, the physical powers to unfold themselves, and the voice to change; but the head still retains its supremacy. From the age of twenty to that of thirty, the cranio-thoracic is in its fullest sway; the moral and physical energy is then great, and a man shews what he is afterwards to become. It is then that genius forces its way against all obstacles. After thirty a kind of maturity or equalization begins to take place between the three great cavities, and from the gradual development of the abdomen the temperament changes to the mixed, and in old age becomes chiefly abdominal. Of course there are numerous individual exceptions, but this is the general order.

In men the cranio-thoracic, and in women the cranio-abdominal, are more frequent. In women the head and the thorax are generally small relatively to the abdomen. But it is not only to different ages and sexes, but even to different species of animals, that the preceding rules are applicable. We may compare the large head of the shepherd's dog with the smaller head, but enormous thorax and small abdomen, of the greyhound; or the relative proportions of the three great cavities in the Flanders horse and in the racehorse; and the striking differences in the size of the organs will be not less apparent than the differences of function or constitution. If we compare, in like manner, the same cavities in the ox or in the sheep, the same coincidence will arrest the attention in a moment.

Different temperaments enjoy very different degrees of health, and are subject to different kinds of disease. The marked encephalic is very prone to over-exercise the brain, and to give rise to convulsive and nervous diseases, hypochondriasis, and mania. From leaving the thorax and abdomen, naturally feeble, unexcited by a sufficient supply of nervous energy, the encephalic is subject also to asthma, bad digestion, and its numerous train of concomitant evils. The marked thoracic, on the other hand, is subject to all the diseases of excited circulation, such as inflammation and rheumatism. The abdominal enjoys, on the whole, good health and vegetative existence, and his diseases are slow and of long duration.

A knowledge of the constitutions or temperaments of individuals is exceedingly advantageous, in regulating the

choice of their profession, manner of living, and general conduct. A due degree of exercise favours the nutrition of an organ, and increases its power and facility of function; while deficient exercise leads to imperfect nutrition and debility of function, and too much leads to an irritable and unsteady action, speedily degenerating into disease. To preserve the advantages conferred by a mixed temperament, therefore, a due balance must be preserved in the exercise and repose of all parts of the system, and none must be left to languish in inaction.

The cranial or encephalic temperament is one of the most disposed to excess and to disease; and when very marked, it is almost always accompanied by discontent, melancholy, and sleeplessness. To obviate those inconveniences, we must moderate the exercise of the brain, in never allowing study or thinking to continue to fatigue, in removing all the exciting causes of great passions, and in employing, on the other hand, the muscles in walking, running, mechanics, hunting, gardening, &c. A cheerful residence in a pleasant country, and avoiding solitude, heat, and cold, are very effectual with the same view. The tepid bath is most useful in moderating the dryness and inaction of the skin, and thus diminishing cerebral excitement. Vegetables, fruits, animal jellies, eggs, and all easily digestible substances which furnish much chyle and develope the abdominal organs, are advantageous; and tea, coffee, and other stimulants are hurtful. Wine ought to be sparingly used, and always diluted. The meal sought to be small and frequent, and followed by repose and rest, as thinking in the encephalic impedes digestion. Sleep is of great consequence to preserve the health of the encephalic.

The thoracic temperament, although less liable to diseases, requires to avoid excesses as well as the encephalic; for although the individual can undergo great physical labour, yet, if he goes beyond his strength, the effects are proportionally severe and speedy in their progress. He thinks with difficulty, and when circumstances excite and keep up in him strong and violent passions, his brain is very apt to become affected. The thoracic development ought in general to be encouraged by a proper attention to exercise and diet; when in excess, it may be gradually moderated by repose, by forcing study for a short time,

and gradually extending it; by exciting the brain and abdomen, in short, at the expense of the thorax. It is the thoracic constitution that is peculiarly subject to inflammation, to rheumatism, &c., and that bears blood-letting without injury.

The abdominal temperament is the most unfavourable, and its subjects are generally inactive and feeble-minded. When it is perceived in early life, it may be diminished or remedied by removing abdominal, and employing thoracic and cerebral stimuli. Frugality, slender repasts, fibrinous meats, drinks which excite the brain, especially active physical exercises, short sleep, and forced study, properly managed, produce the best effects. Every disease in this temperament is complicated with abdominal disturbance. The other compound temperaments may be estimated and regulated from the preceding observations.

The length to which this article has already extended prevents us from saying more than that it is an incalculable advantage to arrive at the causes on which temperaments and their varieties depend, as it is only then, for the first time, that we can adopt rational measures for securing the advantages, and modifying the imperfections, attendant upon each. Our own experience is strongly in favour of Dr Thomas's accuracy; and already we can perceive innumerable applications to be made of his principles to the purposes of education, medicine, and philosophy; and without quarrelling at all with him for not being a phrenologist, in the limited sense of that word, we cannot but express our obligations to him for much useful knowledge, and, in terminating our analysis, transfer to our pages the following practical remarks on the mode of changing one temperament into another. They rest entirely on the principle of *exciting* the *weaker* organs which we wish to predominate, and on condemning to *repose* those which are already too strong.

1. The change of temperament is most easily obtained at the time when the period of life naturally modifies it. In man, the cranio-abdominal child easily becomes cranial between 7 and 14, or cranio-thoracic between 15 and 25, or mixed or thoracic between 25 and 35, or thoracico-abdominal between 35 and 45.

2. The development of a particular temperament is ob-

tained with a facility proportioned to the natural proximity of the one sought for to that already existing. It is difficult for us to make an abdominal become encephalic; but it is not so difficult to convert a mixed into a decidedly thoracic.

3. The organs to be developed must be exercised gradually, and in proportion to their natural force. If too little or too much exercised, they become diseased, languid, or exhausted.

4. That one organ may be developed by exercise, all the rest must be as much as possible in a state of repose. There are even some organs that cannot be exercised freely if the others are not in repose; the activity of the encephalon, for instance, deranges very speedily and powerfully the digestive organs, when both are exercised at the same time, and, if persevered in, soon induces disease.

5. The more numerous and powerful the causes which favour or determine the exercise or repose of an organ, the more will that organ be disposed to exertion or repose, and consequently to develope itself or to diminish.

Dr Thomas's theory, it will be observed, explains very easily the changes that take place in the temperaments at different periods of life. Thus the infant is said to be lymphatic. This arises from the predominance of the abdominal organs, and the consequent activity of nutrition producing a deposition of fat and cellular membrane. The temperament of the same individual may at 18 be no longer lymphatic, but what is called sanguine. This would arise from the thoracic organs having become relatively more developed than the abdominal, and in the same way all the other changes may be perfectly accounted for, and connected with their physical causes; whereas, on the old system, we often have a person lymphatic in infancy, sanguine in youth, and melancholic in mature age, and yet no one could tell how or why all these metamorphoses have happened.*

* Farther observations on Dr Thomas's theory of the temperaments will be found in a subsequent part of this volume of selections.

RESULT OF AN EXAMINATION, BY MR JAMES DE VILLE, OF THE HEADS OF 148 CONVICTS ON BOARD THE CONVICT SHIP ENGLAND, WHEN ABOUT TO SAIL FOR NEW SOUTH WALES IN THE SPRING OF 1826.*

SEEING that no pretension of Phrenology has been more derided than its direct application to the affairs of life, without which it would be a barren and useless discovery, we cannot do more good to the cause than by publishing examples of its practical application. When the male convicts, 148 in number, were assembled for transportation on board the ship England in spring 1826, under the charge of Dr Thomson, a navy surgeon,† Mr De Ville was induced to go on board, and examine the whole gang *overhead*. The experiment was suggested by Mr Wardrop of London, whom we are pleased to see adding a manly avowal of the new science to his other claims to professional distinction. Dr Thomson was not previously acquainted with the subject. Mr De Ville furnished him with a distinct memorandum of the inferred character of each individual convict, and pointed out the manner in which the dispositions of each would probably appear in his general conduct on the passage. The *desperadoes* were all specifically noted, and a mode of treatment to prevent mischief suggested. One man in particular was noted as very dangerous, from his energy, ferocity, and talent for plots and profound dissimulation. His name was Robert Hughes.

The history of the voyage is minutely detailed in Dr Thomson's Journal, deposited in the Victualling-Office; and, by the politeness of Dr Weir of that office, we were, in compliance with our request, not only immediately presented with the Journal, but permitted to take extracts and publish them. From different parts of a log of above four months, we extracted all that concerned the conduct of the convicts, as follows:—

* By James Simpson.—Vol. iv. No. 15, p. 467.

† This charge, for the sake of economy, is committed to navy surgeons who will undertake it; and it embraces the entire management as well as the medical treatment of convicts on the voyage.

"*Log and Proceedings of the Male Convict Ship England, during a Voyage to New South Wales in* 1826. 148 *Convicts on Board.*

"*9th May.* Convicts disposed to be disorderly; read to them my authority to punish; and threatened to act upon it, if they did not conduct themselves in a more orderly manner.

"16*th* —. Same complaint,—and difficulty to get them to keep their berths and clothes clean.

"20*th* —. Punishment by flogging for plundering and violently assaulting each other.

"30*th* —. Symptoms of mutiny among the convicts.

"31*st* —. Received a letter from W. E. Taylor, requesting me to send for him as soon as possible, as he had something to communicate to me privately of the utmost importance. I immediately sent for him, when he informed me, that John George Munns had that morning come to him at the hospital very early, before he or the other convicts were out of bed, and told him privately that there was a conspiracy formed to murder him (W. E. T.) to prevent his giving any alarm, and then to murder me, and all who would not assist them to secure the ship, and run her into South America. That ROBERT HUGHES and Thomas Jones were at the head of it, and it was their intention to carry it into effect the first time the ship was in a squall. In consequence of this information, the following memorandum was given by me to W. E. T. in the form of a protection, to be shewn to such men as he could trust. As two-thirds of the convicts are the most depraved and desperate of characters, and robust athletic men, in order to prevent their taking any alarm, and assassinating in the prison during the night, as they had threatened to do, or at any future period, however distant, those convicts who should divulge their wicked intentions, every necessary precaution was privately taken, until the ringleaders could all be discovered, and safely secured without violence. *Mem.* 'Dr Thomson will thank W. E. Taylor and other well-disposed men to be on their guard, and, if possible, to get such evidence as will enable Dr T. to act against the malcontents. Dr T. promises protection, and his best services with the governor of New South Wales, to such

men as may appear to him to deserve it.' Some of the soldiers had heard in prison what induced them to expect soon to be employed against the convicts. This they reported to Dr Thomson.

"1*st June*. Hughes, for assaulting Daniel Dean, was secured and double-ironed on deck under a sentry. Munns applied for protection from being strangled or assassinated as was threatened. He gave the names of those principally concerned; Robert Hughes (always the first), Thomas Jones, William Brown, James Hawkes, and James Norman. Jones gave himself up, observing, he was not the first bullock that had been sold, and hoped he would have a fair trial. He was double-ironed and handcuffed. Brown, Hawkes, and Norman, were all handcuffed, and placed under the sentries. Other arrangements followed for safety. Crew armed with cutlasses, &c.

"29*th September*. Landed at Sidney. Court of inquiry on 24; Robert Hughes, Thomas Jones, &c."

We have not seen the evidence on the trial, but are informed that the facts of the conspiracy, and the shocking depravity of the mode of the intended murders, were proved beyond all doubt, and that the share each person had in the matter was in very close accordance with the notandum of character affixed to each name by Mr De Ville. Hughes was especially marked by him as a person capable of ruthless murder and deep-laid plots. We have not seen Mr De Ville's memorandum, but subjoin with great pleasure Dr Thomson's letter to Mr Wardrop.

Extract from a Letter of G. Thomson, Esq. Surgeon of the Ship England, to James Wardrop, Esq.

"Sydney, *October* 9. 1826.

"I have to thank you for your introduction to De Ville and Phrenology, which I am now convinced has a foundation in truth, and beg you will be kind enough to call on Dr Burnett, whom I have requested to show you my journal, at the end of which is Mr De Ville's report, and my report of conduct during the voyage; and likewise the depositions against some of the convicts, who you, with your usual *tactus eruditus*, discovered would give me some trouble during the voyage, and I think the perusal of them will make

you laugh, as they were going to rip up the poor doctor like a pig. De Ville is right in every case except one, Thomas Jones; but this man can neither read nor write, and, being a sailor, he was induced to join the conspiracy to rise and seize the ship, and carry her to South America, being informed by Hughes, the ringleader, that he would then get his liberty. Observe how De Ville has hit the real character of Hughes, and I will be grateful to De Ville all my life; for his report enabled me to shut up in close custody the malcontents, and arrive here not a head minus, which, without the report, it is more than probable I would have been. All the authorities here have become Phrenologists, and I cannot get my journals out of their offices until they have perused and re-perused De Ville's report, and will not be in time, I am afraid, to send them by the Fairfield."

We cannot conclude without bestowing a well-deserved encomium on Mr De Ville, for so cheerfully undertaking and so skilfully performing a task from which all but a zealous phrenologist would have shrunk with a mingled feeling of disgust and fear. We regret that the details in the Log-book are so meagre, and that Dr Thomson has not sent home extracts from the evidence on the trial.

ON THE CAUSES AND CURE OF STAMMERING.*

STAMMERING has generally been ascribed to some physical impediment in the tongue, the palate, or some other of the organs of speech; but it is easy to show that its cause is of a very different origin, and that it rarely, if ever, arises from simple malformation of the vocal organs.

It is justly observed by the author before us, who is (or was) himself afflicted to a great degree with this defect of speech, and who is therefore no very incompetent judge, that the anatomical inspection of the vocal organs does not demonstrate any vice of conformation. "The persons," says he, "that I have seen, and who, like myself, spoke

* Du Begaiement, ses Causes, &c. et Moyens Therapeutiques pour Prevenir, Modifier, ou Guerir cette Infirmité; par M. Felix Voisin, M. D. P. Paris, pp. 47.—Phren. Jour., vol. iv. No. 15, p. 458.—By Andrew Combe, M. D.

with difficulty, had not, as is alleged, the tongue larger than other people, nor its ligaments laxer, nor its frenum excessively long, nor the teeth so placed as to present any obstacle. It is incontestable, indeed, that all these lesions exist, and I have myself seen every one of them; but when they do exist, they give rise to phenomena totally different. To be convinced of this it is only necessary to examine the individuals in whom they present themselves. We shall remark, it is true, a greater or less alteration of pronunciation, but *never the characteristic symptoms of stammering.*"

If physical malformation were really the general cause of stammering, the effect would necessarily be permanent, and would affect the same sounds every time they recurred: but the reverse of this is the truth; for it is well known that, on occasions of excitement, stammerers often display a fluency and facility of utterance the very opposite of their habitual state, and that, as Dr Voisin expresses it, "*lorsqu'ils se mettent en colère, ils blasphement avec une énergie qui n'a point échappée aux hommes les moins observateurs.*" P. 4. But passion or excitement can never remove a physical cause, make a large tongue small, set crooked teeth straight, or tighten the ligaments of the tongue, and then let these imperfections return as soon as the storm is over. Such causes may make a person speak thick, or low, or indistinctly; but his utterance will still be as equable and free from stammer as before, and therefore the true stammer must depend on a totally different antecedent.

Dr Voisin proves very clearly, that the real cause is irregularity in the nervous action of the parts which combine to produce speech. This is shewn by analyzing speech. The natural sounds, or vowels, are simple, and require only one kind of muscular action for their production; hence they are almost always under command. The artificial, or compound sounds (hence denominated *con-sonants*), are complex, and require *several* distinct and successive combinations of a variety of muscles; and it is they alone that excite stammering. But it is *the brain* that directs and combines all voluntary motions; and consequently every disturbing cause, not local and not permanent, can affect the voluntary motions of speech only *through the medium of* the brain; and irregular action of the brain must thus

be the indispensable antecedent or cause of the effect—stammering. This will be obvious on reviewing the *exciting* causes of that infirmity.

First, It is no unusual thing to see a person, who is perfectly fluent in conversation, and who has never been known to stammer, become grievously affected with it, if called upon unexpectedly to address a public audience. Every one will admit that, in this case, there is no physical impediment to utterance, but that the cause is in the brain, or organ of the mind, and that it consists in an irregular nervous impulse sent to the organs of speech, and proceeding from a *conflict* between the *desire* to speak well, the *fear* of speaking ill, or perhaps a consciousness of a paucity or bad arrangement of the ideas which he is expected to communicate, or it may be a dearth of words in which to clothe them. In every instance the *essential* circumstance is a conflict, or absence of co-operation among the active faculties, necessarily giving rise to a *plurality*, instead of to a *unity* of nervous impulses, and consequently to a *plurality*, instead of to a unity, of simultaneous muscular combinations; and the irregular plurality of purposes and of actions thence resulting constitutes exactly what is called stammering.

A striking illustration of the truth of this view is the fact, that stammering, or irregularity of action, is an affection not peculiar to the muscles concerned in the production of speech, but is common to these and to all the muscles under the power of the will. Wherever two or more diverging purposes of nearly equal power assail the mind, and prompt to opposite courses of action at the same time, there stammering appears, whether it be in the muscles of the vocal organs, or in those of the feet. We recollect a ludicrous example of this in a boy at a dancing-school ball in the Assembly Rooms. He was dancing very easily and gracefully, and with much inward tranquillity and satisfaction, when, on a sudden, raising his head, his wonder was attracted and dazzled by the unusual splendour of the chandeliers, which he had not before noticed. His feet continued to move, but with evidently less unity of purpose than before, and after making a few unmeaning and rather eccentric movements, or *stammering with his feet* instead of

with his tongue, he fell on his back on the floor, and awoke from his reverie.

Secondly, A person unexpectedly beset by danger *stammers* from head to foot, till his presence of mind gives him an *unity* of purpose, and decides what he is to do. In this instance, it is undeniably the simultaneous existence of opposite mental impulses that produces the effect. For the same reason, the sudden recollection, during an animated discourse, of something forgotten, causes a temporary stammer and unsteadiness of attitude. In short, a multiplicity of impulses causes contrariety of action, and contrariety of action constitutes *stammering*.

"The influence which the encephalon exercises over pronunciation," says Dr Voisin, "is equally established by the observations continually furnished by orators, advocates, and public speakers. If the intellectual operations are carried on with rapidity, if the ideas are clear, numerous, and well-connected, the pronunciation will be free, easy, and agreeable; if, on the contrary, the march of intellect is slow and difficult, and the ideas are confused and ill-arranged, the elocution will partake of the internal trouble, and the orator, thus accidentally a stammerer, will soon have fatigued his audience by his repetitions and disagreeable articulations." We have seen the same thing arise from a deficient supply of words to clothe the ideas that presented themselves; the contrariety arising in this instance from the ineffectual struggle of a small organ of Language to keep pace with the workings of larger organs of other intellectual powers.

Thirdly, The effects of wine and spirituous liquors prove the influence of the brain in the production and cure of stammering. "Look at that individual, who, without committing any excess, is moderately excited by a few glasses of wine: *lately* he was sad, silent, and spiritless; *now*, what a metamorphosis! he is gay, talkative, and witty. Let him continue to drink, and go beyond the measure of his necessities; his head will become embarrassed, and the fumes of the wine trouble his intellectual functions. *The muscles, subjected to the guidance of a will without power, contract feebly, and the most confused and marked stammering succeeds* to the fluent pronunciation so lately observed, and

which depended on the powerful action of the brain on the organs of speech."

Fourthly, From the earliest antiquity accidental stammering has been noticed by physicians as frequently the precursor of apoplexy and palsy, which could happen only from the preceding affection of the brain acting on the organs of speech.

Fifthly, M. Voisin himself remarks the well-known fact, that stammerers are generally very sensitive and easily irritable, and, at the same time, timid and retiring; thus affording the essential contrariety of emotions in its strongest degree. M. Voisin forcibly delineates this state, when he says, "I shall never forget that, in 1813, when I had finished my studies, and was entering on life, my troubled countenance (*ma contenance mal assurée*), my embarrassment and monosyllabic answers, and the silence which fear and timidity almost always enforced upon me, gave to many people such an idea of my character, that I may dispense with quoting the epithet which they were pleased to bestow upon me."

Sixthly, Certain emotions, by exciting the brain, direct such a powerful nervous influx upon the organs of speech, that it not only frees the stammerer from his infirmity for a time, but has even sufficed to deliver the dumb from their bondage, and enabled them to speak. Esquirol gives a curious example of this fact. A dumb man had long endured contempt and bad usage from his wife; but, being one day more grossly maltreated than usual, he got into such a furious rage, that he regained the use of his tongue, and repaid with usury the execrations which his tender mate had so long lavished upon him. This shews how closely the brain influences speech.

Seventhly, Speech is the conductor of ideas, and is useless where none exist. Accordingly it is noticed, that idiots, although they hear well, and have a sound conformation of the organs of speech, and a power of emitting all the natural sounds, are either dumb, or speak very imperfectly.

Eighthly, Under the influence of contending emotions, as is well observed by M. Voisin, the tongue either moves without firmness, or remains altogether immoveable. This, he says, occurs most frequently when Cautiousness or fear and Veneration or respect are the opposing feelings. Stam-

mering from this cause diminishes perceptibly, and sometimes even disappears, in proportion as the individual regains his presence of mind and masters his internal impression. "The observations," he adds, "which I have the sad privilege of making on myself every day, confirm what is here advanced. I have often intercourse with men for whom I feel so much respect, that it is almost impossible for me to speak to them when I appear before them. But if the conversation, of which they at first furnish the whole, goes on and becomes animated, recovering soon from my first emotion, I shake off all little considerations, and, raising myself to their height, I discuss with them *without fear*, and without the slightest difficulty in my pronunciation." This indicates the supreme influence of the nervous influx on the movements of the vocal muscles, and it is curiously supported and illustrated by a fact mentioned by M. Itard, of a boy of eleven, who was excessively at fault whenever he attempted to speak in the presence of persons looking at him, but in whom the stammering instantly disappeared as soon as, by shutting out the light, he ceased to be visible. This is explicable only on the theory of opposite mental emotions.

Ninthly, As the individual advances in age, and acquires consistency and unity of character, the infirmity becomes less and less marked, and even frequently disappears altogether. In the same way it is generally more marked in the morning than in the evening; because the brain has not then assumed its full complement of activity, nor been exposed to the numerous stimuli which beset it in the ordinary labours of the day.

A late writer seems to us to mistake the effect for the cause, when he says that stammerers, being deprived of the means of communication with their fellows, *become* reserved and timid in society, and of exquisite sensibility; for, according to the view we have been unfolding, the natural timidity and sensibility, instead of being the result, are in fact the chief causes of the stammer or defect in pronunciation. And we think this confirmed by his own observation, that old age is generally a cure, and that "old men, when interrogated on the causes of the amendment, generally attribute it to their having become less hasty, or *much*

more moderate and *considerate*, and in a much less hurry to force out their ideas."*

The cerebral and mental cause of stammering explains the effects of education and the rational mode of cure.

Speech being the vehicle of ideas, and of no use but to convey them, it is obvious that one important condition in securing a distinct articulation is to have previously acquired distinct ideas. Idiots, having few ideas, never learn to speak. For the same reason, children ought not to be forced to speak in the way that is generally done. This ill-timed haste has the opposite effect from that desired, for the subjects of it speak later and with greater confusion; and the extreme attention that is paid to their every word, dispenses them from distinct articulation, and causes a bad pronunciation for their whole lives. This is remarked very often in children brought up in towns. They speak earlier but much less distinctly, than those reared in the country. Learning by rote is held by Dr Voisin to be very pernicious, as it accustoms the child to negligent and unmeaning pronunciation in his repetition of the same words.

It is remarked, indeed, that those who are late of speaking never speak so distinctly as the others; but here the effect is often mistaken for the cause, for the child is long of speaking only because his vocal organs are *naturally* embarrassed, and not because they have lain idle from the want of speech. If the organs were not constitutionally impeded, why should any one child be longer of speaking than another? The child that stammers has quite as much use for speaking as any other, and in general he is stimulated to an infinitely greater degree to exert his power of speech. Parents become uneasy, and, by their ill-judged efforts at hastening improvement, often cause the very defect they seek to avoid.

From this view it will appear that the cure of stammering is to be looked for in removing the exciting causes, and in bringing the vocal muscles into harmonious action by *determined* and patient exercise. The opposite emotions, so generally productive of stammering, may, especially in early life, be gradually got rid of by a judicious moral treatment,—by directing the attention of the child to the exist-

* Dictionnaire de Mêdêcine, tome iii. p. 344.

ence of these emotions as causes,—by inspiring him with friendly confidence,—by exciting him resolutely to shun any attempt at pronunciation when he feels himself unable to master it,—*by his exercising himself when alone and free from emotion, in talking and reading aloud, and for a length of time, so as to habituate the muscles to simultaneous and systematic action*—and, we may add, as a very effectual remedy, by *increasing the natural difficulty in such a way as to require a* STRONG *and* UNDIVIDED MENTAL EFFORT *to accomplish the utterance of a sound*, and thereby add to the amount of nervous energy distributed to the organs of speech. The practice of Demosthenes is a most excellent example. He cured himself of inveterate stammering by filling his mouth with pebbles, aud accustoming himself to recitations in that state. It required strong local action, and a *concentrated attention*, to emit a sound without choking himself, or allowing the pebbles to drop from his mouth; and this was precisely the natural remedy to apply to *opposite and contending emotions and divided attention.*

Demosthenes adopted the other most effectual part of the means of cure. He exercised himself *alone*, and *free from distracting emotions*, to such a degree, that he constructed a subterraneous cabinet on purpose for perfect retirement, and sometimes passed two or three months without ever leaving it, having previously shaven one-half of his head, that he might not be able to appear in public when the temptation should come upon him. And the perfect success which attended this plan is universally known. His voice passed from a weak, uncertain, and unmanageable, to a full, powerful, and even melodious tone, and became so remarkably flexible as to accommodate itself with ease to the very numerous and delicate inflections of the Greek tongue. But as a complete cure, or harmonious action of the vocal muscles, can be obtained only by the repetition of the muscular action till a habit or *tendency to act* becomes established, it is evident that *perseverance* is an essential element in its accomplishment, and that without this the temporary amendment obtained at first by the excitement consequent upon a trial of any means very soon disappears, and leaves the infirmity altogether unmitigated.

M. Itard, whom we have already mentioned, recommends very strongly, where it can be done, to force chil-

dren to speak in a foreign language, by giving them a foreign governess or tutor; and the propriety of this advice is very palpable when we consider that it requires a more powerful and concentrated effort to speak and to pronounce a foreign than a native tongue, and that it is precisely a strong, undivided, and long-continued mental effort that is necessary to effect a cure.

M. Itard regards weakness in the muscles of the voice as the cause of stammering, and he has invented, and used with much success, a small forked instrument, which he places under the tongue, in order to give them support. We approve highly of the practice, but think his explanation of its efficacy likely to lead to error. To us it appears to serve the same purpose that the pebbles did in the mouth of the Grecian orator, viz. to solicit such an amount of nervous stimulus to the parts, and such an effort of attention as shall absorb the mind, and prevent its unity of purpose being divided by contrary emotions. And the proofs that this is the true source of the muscular debility are, that for all purposes except speaking, the movements of the lips and tongue are as powerful and as perfect as in any other individual, and that old age, which increases real debility, and which, therefore, ought to increase stammering if it arose from this cause, almost invariably cures it. We think it right to notice this mistake in principle, as, from M. Itard's well-merited reputation, his practice is likely to be followed; and as every man will modify it according to his own lights, many, viewing it as a mere mechanical support, might do so in a wrong way, and produce mischief instead of benefit, and then blame him for misleading them.

It is scarcely necessary to add, that debility, in which this, in common with many other forms of nervous disease, often originates in the young, must be obviated by a due supply of nourishing food, country air, regular exercise, and, though last, not least, by cheerful society, kindness, and encouragement. The use of Phrenology in enabling a stammerer to understand his own case, or a parent to direct the treatment of his child under this infirmity, is so obvious, that we reckon it unnecessary to dwell on it. By rendering the nature and modes of action of the mental powers clear and familiar, it aids us in removing every morbid affection of which the origin lies in them.

CASE OF MENTAL DERANGEMENT, WITH GRADUAL DIMINUTION OF THE SIZE OF THE HEAD.*

T—— D—— was intended for the medical profession; but, when about eighteen or nineteen years of age, shewed obvious aberrations of mind that unfitted him for any employment. His father having died, and left him a sum of money, the interest of which, under economical management, might suffice for his support, application was made by his relations to the Court of Session, who appointed me curator of his effects, it not being necessary to confine his person. This power was conferred in 1819; and from that time up to July 1827, when T—— D—— died, he continued under my superintendence.

In 1819, T—— D——'s head was fully of an average size; the knowing organs were largely developed, the forehead rose high and rather perpendicularly, but was not broad. The organ of Comparison was considerably larger than Causality and Wit. The organs of the propensities were developed in about an average degree; Acquisitiveness and Secretiveness having rather the predominance. The organs of Self-esteem and Love of Approbation were decidedly large, the former much above an average. Imitation and Firmness were large, and the moral organs well developed. There was no circumstance in the size or shape of the brain that indicated insanity, so that the disease was obviously one affecting its internal constitution.

His alienation presented the following features:—He was easily provoked, and fierce when irritated, but otherwise free from all malevolence. He entertained an exalted opinion of his own greatness, and conceived himself to be a genius of the highest order, particularly in the drama, and on this account adopted the name of Shakspeare. For many years he subscribed his name "T—— Shakspeare D——." He was fond of money, extremely alive to order, and a great admirer of the fair sex. In other respects his mind presented no particular appearances.

The notion of his own greatness was obviously referable

* By George Combe.—Vol. iv. No. 16. p. 495.

to his ample development of Self-esteem; and its direction towards the drama is accounted for by the combination of large Secretiveness with Imitation and Comparison. He was fond of frequenting the theatre, and imitated with considerable success Kean and other striking actors. To establish his title to the name which he had adopted, he wrote a farce, presented it to Mr Murray of the Theatre-Royal to be acted, and, in astonishment at his rejection, printed it to convict the manager of deficiency of discrimination and taste. It was destitute of all coherence, aim, or object; but replete with forcible conceptions and odd comparisons. One of his personages says, "I'll tell you what, when the universe assumes the form of a handkerchief near falling out of a gentleman's pocket, that union which you contemplate upon will happen." Another is described as "looking just like stupidity benumbed by Covent-Garden tailors, and, when you talk, your teeth present the appearance of rumps of hedges."—"O loggerhead, have I lost my wits, that you are arraying your force with all the gravity of a lawyer taking a guinea-note when he was entitled to a pound?" A young fop is characterized thus: "When he plays upon the piano, it's just discordance drunk,—impudence dressed like a puppy,—extravagance and nonsense sitting at the fire, having been banquetting and lounging there, being full gorged with the fat luxuriance." His remarks on female beauty are frequent. One of his characters addresses a lady who is in love with him: "Go to—go to—take your plain feet hence; moreover, I hate plain feet. I have truly uttered my voice." To another, whom he admires, he is more complimentary: "Be thou great cozening Venus, madam, or the resemblance of the dawning day, ushering thy form and potent quibbling lips before our eyes, just as the light descending down the skies." A lady who repeats a commendation on herself as likely to make "a goodly wife," is told that it is "as huge a lie as a man enduring the massy weight of a tan-yard on his back." He sold his farce among his friends, enjoyed their praises of its merits, and ever after conceived his equality with Shakspeare indisputable. In this production his large Comparison is very conspicuous. In it, as well as in his general conduct, his knowing organs, propensities, and sentiments, manifested themselves in tolerable

sanity, while his reflecting intellect appeared greatly obscured.

His appetite for money was so great, that he sometimes nearly starved himself through aversion to pay for food. He was fond of spirituous liquors, but fonder still of money, and never drank when he required to pay; so that, except when unprincipled individuals filled him drunk to render him a spectacle for their own amusement (which was sometimes the case), he was habitually sober. This shewed the activity of Acquisitiveness.

His love of order was conspicuous. He was sometimes oddly but always cleanly dressed, and his lodgings were a pattern of arrangement.

It was not necessary to put him under confinement; but when a legal guardian became necessary, the puzzle presented itself how to get his own mind reconciled to it. To have told him that he was insane, and required a curator, would have rendered him furious, and aggravated his malady. This difficulty was overcome with complete success by addressing his predominant faculties. I recalled to his mind the poverty and ruin that had imbittered the lives of men of genius, particularly poets, from Homer down to Burns; told him that his genius had been recognized; that to free him from every similar danger, and also to leave his mind in freedom to take its loftiest flights unencumbered by paltry cares, a curator of his pecuniary interests had been appointed, who should merely collect his funds, and be at all times accountable to him for their disbursement. He was delighted at this idea, and submitted without the least reluctance to my control.

Occasionally, however, he met with persons who seemed desirous of torturing his mind in the most vulnerable points: they assured him that he was treated as insane, that his guardian was not accountable to him, but held his funds for the benefit of his relations; and that the expense of management was enormous, and was a robbery committed against him; and by such representations they wrought him up to the fiercest indignation.

In this humour he regularly visited me, and poured out a storm of abuse; but in a few minutes, by addressing his faculties in an agreeable way, he was calmed. I asked him whether men of genius were not pursued by envy, and

whether he was well assured that the representations he had received were not dictated by that spirit, and intended merely to detract from the honour he enjoyed This was a view of the case highly gratifying to his Self-Esteem, and he readily seized upon it. Knowing his parsimony, I requested him to make the experiment whether his funds were not at his own disposal, and desired him to write an order for a donation of L.50 to the Infirmary, or any charitable institution, and see whether it would not be paid; or to take L.20, and amuse himself with an excursion in the country. Such was the constitution and state of his mind, that it was just as impossible for him to do either, as to convert himself into a real Shakspeare; but, like many wiser persons, he had no idea that his actions were controlled by his dispositions; he declined making these experiments as unnecessary, and retired quite satisfied that he possessed the uncontrolled disposal of his effects.

Some of his productions shew strongly the state of his faculties. The following note is dated 25th February 1823, and, in the profusion of assumed titles in it, forms an amusing illustration of the activity of his Self-Esteem and Love of Approbation:—"President D—— herewith transmits his compliments to President Combe, W.S., and requests to know why Mr T—— L—— [my clerk] writes him a card about some L.3 : 19 : 4, which afterwards he does not acknowledge personally; Physician D——, A.M. LL.D,. &c., &c. having previously chalked it down in his day-book.—Yours, T—— D——, M.D., F.R.S.E."

In the month of May last he became seriously indisposed, but could not be persuaded to follow medical prescriptions, or even to take the necessaries of life. His landlady was instructed to supply him with every thing that could minister to his comfort, as *an indication of her profound respect for the honour he had conferred on her by lodging in her house*, but to be paid for privately by me. This took effect at once. As long as he had to pay, he pretended he had no appetite, and that he could not eat; but when the mark of respect was mentioned, he acquired vigorous powers of digestion, and ate readily. His complaint was in the lungs, and one day, when very ill, he was met by a friend at the head of the Vennel, a very steep lane in Edinburgh, leading from the Grassmarket to Laurieston,

and held the following discourse:—"I have had a sore battle," said he. "With whom?" "With my body to be sure. When at the foot of the Vennel there, it rebelled and would not mount; but I assured it that I had never yet submitted to my body, and was resolved it should not conquer me now. I told it that it might take its time, but ascend it should to the top. So," continued he, "I set out, but had not got ten yards when my body rebelled again, and refused to mount; but I just replied, that up it *must go*, and that it was in vain for it to try to get off; and so to it again I went; and here I am you see: I have forced it up, after half a dozen of stoppages. I am determined that I shall never be beat by my body." The real cause of the rebellion was weakness and want of breath. In this disseveration in personality of himself from his body, he reminds us forcibly of the metaphysicians, some of whose discourses about the mind's independence of its organs are not much superior in sense to the foregoing dialogue.

Among the last acts of his life were, preparing to rise, not that he might yield to his body, and desiring a chair that was out of its place to be put in its proper position.

His head decreased in size during the progress of his insanity, and to such an extent that he observed the circumstance himself, and said that he required a smaller size in each successive hat that he purchased. His intellectual faculties were obviously feebler in the latter years of his life, for he became incapable of collecting money by presenting receipts, and performing some other little pieces of business which in former years he had accomplished; and his forehead very perceptibly diminished and retreated during the corresponding period. He accounted for the decrease in the size of the hats he required, by ascribing it to the sublimation of his brain; he said he was becoming purely ethereal, and that the grosser particles of his head were evaporating daily.

"The body was opened forty-two hours after death. The small size of the forehead was remarkable. The integuments were very adherent, and the skull so dense as to be sawn with difficulty. It was of very unequal thickness; and the forehead presented a large frontal sinus of great depth, which also extended backwards over the orbitar plate nearly to the bottom of the socket. The dura-mater

adhered firmly, but presented no unusual appearance, except being, in common with the skull and brain, more highly vascular on one side than on the other. One hemisphere was turgid with blood, and, when cut into, presented numerous red points, a very deep red brown *corpus striatum*, and a little bloody serum in the ventricle. The other was rather paler than natural, forming a contrast in every point with its fellow. Nothing else remarkable was noticed in the head; and no symptom indicated, during life, this inequality of affection. The head was under the average size, but high, particularly towards Self-Esteem and Firmness."

These appearances, particularly the great density of the skull, and the remarkable extent of the frontal sinus backwards over the eyes, shew the existence of long-continued morbid action in the head, and afford a strong presumption that the anterior region of the brain, which is the seat of intellect, had undergone a diminution even greater than that indicated by the external surface of the bone. It is also worthy of notice, that the corpus striatum, which was evidently much changed in structure from the healthy state, serves to form, or rather to increase, the mass of brain corresponding to the organs of the intellectual faculties.

CASE OF MORBID EXCITEMENT OF THE ORGAN OF NUMBER. BY DR ALDERSON OF HULL.*

Master B., a very fine ingenious youth, about fifteen, complained, on his return from school the last vacation, of an intense pain over the outer angle of each eye, darting obliquely through the eyeball to the root of the nose: there was not the slightest appearance of inflammation in any of the coats of the eye; his pulse full and hard, his manner highly excited, his tongue creamy; he was costive and chilly.

He had always shewn a decided preference for figures, and was highly read in mathematics; but his father (himself eminent for the classics and mathematics, and a high wrangler) was desirous that his son should persevere, and lay aside his mathematics, in order to perfect himself in the

* Vol. iv. No. 16. p. 558.

classics before he went to Cambridge. To accomplish this wish of his parent, he bent the whole of his mind and faculties during the session to this end, and at the vacation he returned with every demonstration of having done his utmost, to the entire satisfaction of the master, for he had awarded him the prize for the first classic of the year; but, alas! this was not obtained without a high degree of morbid excitement in the brain, and that, too, precisely in the places I have already pointed at, as far at least as can be judged of by symptoms. I immediately forbade all application whatever to those studies to which he had hitherto addicted himself, and ordered employment in the trifling amusements of his young brothers; having put him under the most decided antiphlogistic treatment, he recovered in a few days, and was, to all appearance, perfectly himself again.

In the course of a week I called upon him accidentally, when he declared himself perfectly well; but I detected him at his favourite pursuits; he had got a new publication on mathematics, and I prognosticated a relapse; the very next day his pain, as intense as before, attended the left eye at the outer angle. He submitted to his former treatment, and was restored; he has remained well ever since, and has gradually returned to a well-regulated course of study.

I have drawn the attention of the Society to this case, because I have no doubt they will see this young man return from Cambridge with the honours that have adorned so many of his townsmen at that University.

SIZE OF HEAD, NATIONAL AND PROVINCIAL, OBSERVED BY AN EXPERIENCED HAT-MAKER OF LONDON.*

To the following curious and unexpected communication we have more than ordinary satisfaction in giving a place. It was read to the London Phrenological Society; and from the very extensive field of observation enjoyed by its author, and from the manifest accuracy and even scrupulosity of his statements, we regard them as entitled to confidence, and as really valuable to the extent of demonstrating the fact of different sizes of heads belonging not only

* Vol. iv. No. 16, p. 539.

to different sexes and districts of country, but to different classes of society. This is a great step towards connecting general mental power with general size of brain; but a greater and more difficult still remains, viz. to determine the particular regions of the head in which the greatest relative size prevails in different classes and in different counties. This cannot be accomplished by the efforts of one, but by the multiplied and corrected observations of many; and we merely suggest it to our author, as a person likely to interest himself in the inquiry, and qualified to conduct it. We have made many observations on the relative developments of the different organs in heads of similar general size in different counties in Scotland, and only delay publishing them to avoid falling into mistakes by too rash an induction. We trust, however, that the following paper will soon attract attention, and lead to the acquisition of abundant information.—EDITOR.

Having, in my avocation as a hat-maker, for some years observed the various sizes of the human head, and satisfied myself that much peculiarity of shape exists not only in individual cases, but also in various classes of society, it may be believed that, upon attaining a knowledge of the first principles of phrenology, I became the more easily a convert to its doctrines. My intention this evening is to present to the Society some facts with regard to variations in the size of the human head, the result of my own experience, confirmed by all the aid I have been enabled to obtain from others better-informed than myself. But I beg to state, that I wish to confine myself to the detail of mere facts, independent of phrenological inferences, anticipating that every information connected either with the form or size of the human head will prove acceptable to the friends of the science. I am nevertheless aware, that any conclusions I might draw as a phrenologist from partial information would be liable to objection, as leading to dangerous errors; for size to the phrenologist is but one point, and, singly, is inadequate to furnish the means of judging of mental capacity; how much more partial and unsatisfactory must be the mere measurement of a hatter. In the quality of general size, many of the most barbarous nations rank equally with, if not superior to, the more cultivated

and intellectual inhabitants of Europe; while the Hindoo head, although small, is known to indicate a much higher intellectual capacity than that of many nations that are above them in mere measurement. The quality of head as well as the quantity must be attended to; and it is only in the proportions of the several regions joined to general measurements that a knowledge of the latter becomes useful. Mr Combe states, with regard to size, page 44, "General size is no indication of particular power; an individual may wear a large hat, indicating a large brain, and yet have no scope of intellect, no ability in the general sense of the term. If the large hat is requisite from the great development of the animal organs, the individual may be a powerful animal, and at the same time a weak man. It is only when great size pervades the whole three classes of organs, propensities, sentiments, and intellect, that phrenology authorises us to expect a character vigorous, comprehensive, and profound."

Inquiring into the general size of the head in some national cases, but more particularly confining myself to the various classes of society, and to different provinces of this kingdom, it will be necessary to state the mode of a hatter's measurement, in order rightly to appreciate its value. Various methods are adopted, but the most general is to take the simple length and breadth of the head, which, although inadequate to phrenological purposes, is sufficient for ascertaining general size. The head being oval, the length and breadth are taken, the medium thereof being the diameter or hatter's measurement, from which the circumference is ascertained. For instance, a hat 8 inches long by 7 broad, is $7\frac{1}{2}$ diameter, or hatter's measure; 7 inches by 6 is $6\frac{1}{2}$ medium, or diameter. Upon this principle, blocks are used in the manufacturing and measuring of hats to particular sizes, varying from 5 inches, the size of an infant, increasing by the $\frac{1}{8}$ of an inch to $7\frac{3}{4}$, the general full size of men. In using the term size, or large and small heads, I must be understood to speak of hatter's measurement, applying only to the circumference of the head within the range occupied by the hat, comprehending the reflective organs to the middle of the forehead, forming an oval round the head, resting upon or covering a portion of the basilar region on the sides and posterior portions, so

that the perceptive organs and the coronal surface are out of its contact.

By this mode of measurement the range of the male head in England, at maturity, is from $6\frac{1}{2}$ to $7\frac{3}{8}$, the medium and most general size being 7 inches. The female head is smaller, varying from $6\frac{3}{8}$ to 7 or $7\frac{1}{8}$, the medium male size. Fixing the medium of the English head at 7 inches, I shall be enabled to distinguish the portions of society above from those below that measurement. Commencing with London, a perceptible difference will be observed between the higher and lower classes of society. In the former, the majority are above the medium, while amongst the latter it is very rare to find a large head. This is easily proved by the different qualities of hats in requisition by each, in the manufacturing of which a distinct difference in the scale of sizes is observed. Taking the two extremes of society, this rule will be found invariable throughout the country, the middle ranks of life forming a medium between the two. Establishments at the west end of the town, confined exclusively to the service of the higher circles, require more large hats in proportion than other hatters whose trade is confined to the middle ranks; and again, the business with the lower class presents the same relation to the class above them, requiring a greater proportion of small hats than either of the other classes. These statements can be proved in a variety of ways. Take the average sizes of livery-hats for servants, the scale will be found less than for their masters. The sizes observed in furnishing a regiment of soldiers are easily ascertained. Seafaring men, and individuals connected with shipping and on the water, wear a peculiar small hat; and the japanned leather hat, the dog-hair hats worn by carters, waggoners, and the labouring agriculturist, the round-crown-shoulder hats, in use by coal-heavers, corn-porters, &c., and the common plated hats in general request by the working classes, present great facility for judging of general measurements for the lower orders, in all of which, as compared with the finest hat made, there is a striking and manifest difference. In the lower ranks of life, the majority are below the medium of 7 inches, and the higher classes of society above it. Not only a difference in size is observed, but also a variation between the two classes exists in the circle of the head coming in con-

tact with the hat, so as to influence the measurement. The upper portions of the head, comprehending the reflective organs, Ideality, and Caution, come in contact, to increase the general circumference of the hat in the higher classes of society; but the same effect is not observed in the lower walks of life; the circle round the head in immediate connexion with the basilar region, the hat resting upon or covering the ear, will shew that the size is more to be ascribed to that fraction of the head than to the upper region. The slanting off of the lateral superior circumference much decreases the general measurement. The weavers of Spitalfields have extremely small heads; $6\frac{1}{2}$, $6\frac{5}{8}$, and $6\frac{5}{4}$, are prevailing sizes. In Coventry, almost exclusively peopled by weavers, the same facts peculiarly are observed.*

Leaving London, to the north and north-east, in the

* This correspondence between size of head and class of society, is a fact of peculiar interest, and we earnestly recommend to the author to extend and systematize his observations upon it. It is established phrenological doctrine, that size of brain is just that power of character which will extend the influence and advance the rank of its possessor. It is, or rather it was, by no means essential that the size shall be an intellectual, or even moral development. As society is constituted, a very large endowment of the selfish sentiments of Self-Esteem, Love of Approbation, and Firmness, added to the propensities of Acquisitiveness and Secretiveness, which gives tact or *savoir faire*, with Combativeness, and no very troublesome impediments from size in the regions of Conscientiousness, Benevolence, and Veneration, all keeping in activity good knowing faculties, will be found the fittest endowment for what is called *pushing* the individual's fortune. In rude times, when, be it remembered, the most valued high rank was established, such were many of the heads which achieved crowns and coronets. Such were the heads of Bruce and Napoleon, both far above average size. By the universally admitted laws of propagation, the type of size is likely to remain with the descendants of these large heads to an extent sufficient to mark the class, although in many individual cases, intermarriage with inferior heads may diminish the size. Such degenerate heads, if not supported by artificial means, such as entails, will descend again in society, and are doing so every day; while larger heads are rising from the lower to the middle, and from the middle to the higher ranks; "the descendants of those who rode in coaches are changing places with the posterity of those who sat on the boxes." It would be very interesting to observe, on a minute examination into the actual development of the middle classes, as compared with the higher and lower, whether there is ground in superior *moral* endowment for its proverbial moral superiority—keeping in mind what has already been said, that a very scrupulous *moral* endowment, as society is yet constituted, is rather an impediment to a great ascent in life; and this, notwithstanding that great intellectual power, as in Napoleon, is more in request than it was in the days of Bruce.—EDITOR.

counties of Hertford, Essex, Suffolk, and Norfolk, a greater number of small heads will be found than in any other part of the empire. Essex and Hertfordshire are the most remarkable for requiring small-sized hats—7 inches, the medium size given, is here, as in Spittalfields or Coventry, a full size—$6\frac{7}{8}$ and $6\frac{1}{2}$ are prevailing sizes—and $6\frac{3}{8}$, the usual size for a boy of the age of six years, is here often to be met with in the full maturity of manhood. Crossing over the Thames to Kent, Surrey, and Sussex, we observe an immediate increase in size of the usual average; and the inland counties in general, I believe, are upon nearly the same scale; but, as I intend to confine myself to personal experience, or information I can perfectly rely on, I shall pass unnoticed those portions of the country of which unsatisfactory report only has informed me of the existing peculiarities, reserving for a future period, and after a more extended inquiry, the detail of these. Towards Devonshire and Cornwall the heads are quite of the full sizes—many very large hats are required for both counties. The Welsh heads are above the usual average; and in the county of Hereford, on the borders of Wales, they are much superior to the London average.* I have been inclined to the opinion that a difference exists in point of size between agricultural and manufacturing districts, from observing many parts of the country entirely devoted to the former pursuits exhibiting small heads when contrasted with those in many manufacturing districts. But further inquiry has shewn the distinction objectionable; as there are many manufacturing towns and districts whose average sizes are by no means superior to those of the tillers of land; while Devonshire and Herefordshire, which are purely agricultural, shew full-sized heads—the latter, in particular, is remarkable for its average being above this metropolis. Travelling towards the north, a gradual increase will be observed, the counties of Lancashire, Yorkshire, Cumberland, and Northumberland having more large heads in proportion than any other part of the country; the largest sizes I could ever trace have had their origin in the northern part of England, or Scotland, the neigh-

* The Welsh are Celts, and the Celtic head, though long, is not large. That the Welsh head exceeds the usual average, would require a wider and more accurate induction.

bouring portion of the kingdom; and, on the contrary, I have traced repeatedly the small head to the districts I have before alluded to as exhibiting that peculiarity, Essex, &c.

Entering Scotland, the full-sized head is known to be possessed by its inhabitants.* It is unnecessary for me to say much upon the general measurements of the Scotch head; our friends in that country are far more competent to give the information; I wish only to confirm the observations of the Edinburgh phrenologists, and acknowledge their superiority, in point of size, over our more southern region:—the full size of the English head I have before fixed at $7\frac{5}{8}$—but here an increase upon that measurement is to be met with to $7\frac{5}{4}$, $7\frac{7}{8}$, and even 8 inches. Such extreme size, no doubt, is rare. The contrast in the trade of Essex and Hertfordshire with this country, in point of size of hats, is very manifest; 7 inches, the general medium, being a large size in the former counties, is considered in the north approaching to a small size. Large heads are

* There is a very common anecdote of an ostler at an inn, who was asked how he, being *Yorkshire*, had never *risen* in the establishment, who answered, "*Master's* Yorkshire too, sir." "Too far north for me" is a southern adage, meaning not only superior sagacity, but superior power. These are very apt to be looked upon by Self-esteem as mere craft and cunning; hence the phrase has received a sort of reproachful meaning. The notorious rise of Scotch privates in English regiments to the rank of non-commissioned officers may be the joint result of relatively larger head and superior education. A profound notion prevails in London, that Scotsmen are excluded from the direction of the Bank of England—which, by the way, a large Scotch head first projected—because, as has happened in the India House, when one gets in, the direction is apt to *grow* all Scotch together. For centuries, a population in Scotland, probably under half a million, maintained their independence against the greatly-superior population and wealth of England, and, when once it was lost, recovered it by an exertion of tremendous energy. The most formidable enemies of the Scots were their immediate neighbours in the north of England. Marmion (himself still more a Southron), when lying wounded, thinks of the northern English to save the battle:—

> "To *Dacre* bear my signet ring,
> Tell him his squadrons up to bring;
> Bid *Stanley* charge with spur of fire,
> With *Chester* charge, and *Lancashire;*
> Full upon Scotland's central host,
> Or victory and England's lost."
> * * * * * *
> "Charge, *Chester*, charge!—on, *Stanley*, on!
> Were the *last* words of Marmion."

EDITOR.

no doubt to be found in Essex, and small heads in Scotland; but they must be viewed as exceptions rather than as the provincial or national sizes. The scale of measurements in furnishing a Scotch regiment is larger than that required for an English regiment; and in my search for information, I met with the following order, received by a London military house from a correspondent in the north for 220 yeomanry caps:—"Pray be particular in the sizes; let the majority be large, none less than $6\frac{7}{8}$, and a very few of that size." In another letter, received by the same house, there is this expostulation from the neighbourhood of Aberdeen:—"Once more I must tell you, not to send hats $6\frac{5}{4}$ or $6\frac{7}{8}$ without orders. I have now more than I can sell for twelve months. Let the order now enclosed be sent exact in sizes,—

2—$7\frac{5}{4}$ 6—$7\frac{1}{2}$ 12—$7\frac{1}{4}$ } All above the English
2—$7\frac{5}{8}$ 6—$7\frac{5}{8}$ 8—$7\frac{1}{8}$" } medium.

Although this order cannot be taken as a criterion of national sizes, as it is evidently given to make up for a previous consignment of small hats, it is sufficient to prove a degree of measurement in the north which this country cannot boast of.

The low-priced goods are supplied wholly from Manchester; consequently my information with regard to that trade is limited. But a circumstance connected with the same trade came under my observation last year, which will partly shew the relative sizes of the two countries:—A manufacturer at Manchester received an order from a London house to send off immediately a particular quality of hats. Having the same description of order ready packed for Scotland, he sent off that package promptly to oblige his London correspondent, without any regard to the sizes, to the metropolis. To the mortification of the individual to whom they were invoiced, they proved to be perfectly unsaleable, from the whole of them being very large in sizes; the consequence has been, that nearly the number of hats sent, from their extra size for the lower trade, remain to this day on hand.

Respecting the Irish head, it is stated in the second volume of the Phrenological Journal, page 17, that the heads of the educated classes in Dublin are generally small; and information is required by the writer from some London

hatter as to the average size of fine hats sent to that city, anticipating that they are inferior in sizes to those sold in London and Edinburgh. In so far as I know, I am not enabled to confirm this statement, as the average sizes of fine hats sent from this city to Dublin are superior to those in the London trade. My information is gathered from the sales of the three first houses in Dublin. The general request in orders received in London from them is to send large, and not small sizes, the latter remaining useless upon the shelves; the scale always observed is above the London average, and orders are sometimes received equal in size to the full Scotch head. The higher classes from Ireland residing in this country are likewise above the English average; and the lower order of Irish resident here exhibit a superiority in size to the English labourer. In so far as I am experienced, I should say, that the Irish generally possess larger heads than the English; but those persons who have visited that kingdom are better able to decide the point, as the individuals in this country cannot be considered a fair national type, and as my opinion is formed on grounds too partial to lead to a general conclusion.*

Respecting foreign nations, I am unable to speak with much certainty; I shall therefore confine myself to a very few remarks on them. All *northern* nations have large heads; the Norwegian sailor's is much superior in point of size to the English sailor's, and the women's bonnets and hats exported to that country are required larger than is necessary for the population at home.† Hats for the West Indies are smaller than the English standard; and hats ex-

* There is a great population in Dublin, and within the pale as it was called, essentially English; still the prevalence of moderate-sized heads was there observed in the better classes. In the theatre, or at an assembly, in Dublin, for example, the heads of the men appeared to the eye to be smaller than the heads of the same classes in London or Edinburgh. We are not aware of the extent to which London hats are used in Dublin. If they are confined to a certain rank, they will not afford a correct standard of the general size. Farther observations may reconcile the apparent discrepancy. Of the lower Irish heads the author does not speak. Few orders for *new* hats to cover these will, we take it, reach London.—EDITOR.

† New blocks had to be made in France, of a larger size, for the British army; and it was some years after the peace before Parisian hatters could fit English gentlemen who applied to them. The French head is known to be smaller than the English.—EDITOR.

ported to our colonies can safely be stated to be generally below the sizes of the average English head.

Dr Spurzheim, treating of national faces, says, "The inhabitants of the south-west of Scotland, those of the north-east, and those of the Highlands, belong to three different races. England and Ireland have been occupied by various nations, particular districts of each have a population originally different. In the county of Norfolk, the same round and well-fed figures are seen which Rubens has transferred to his canvass from natives of Holland." And Dr Abel of Dublin stated to this Society some time since, that there is a race inhabiting a portion of the south-west coast of Ireland distinctly different from the general class of Irish, both in features and cerebral development, whose ancestors are believed to have been originally from Spain. That race exhibits still several peculiar marks of the Spanish character. It is well known that national heads exist as well as national faces, and that there is a possibility of tracing one as well as the other; I have confined myself to size alone, and have endeavoured to prove that there exists not only a national, but a provincial difference in that particular; but as a comparison has been made by writers on Phrenology between the size and cerebral development of the conquerors and of the conquered in various parts of the world, so as to account upon the phrenological principle for the superiority gained, it would be interesting to ascertain, if possible, how far these principles can be applied to our own country, by tracing the form and size of head from which the several districts were originally peopled, so as to shew, in those who so successfully overran the country, a superiority of development over its primitive inhabitants.

The Saxons, the Danes, and the Normans, have each, in their turn, invaded and established themselves in England. History also informs us, that the ancient Britons were either exterminated by their invaders, the Picts, the Scots, and the Saxons, or forced to take shelter on the confines of Cornwall, or in the mountains of Scotland and Wales. I am aware of the difficulty of tracing, at this advanced period, any vestige of the primitive inhabitants of this country; but if a possibility does exist, to Wales I should give the preference for research. The remnant of Britons re-

tiring to that country, the barrier formed by the range of mountains separating Wales from England, and preventing intercourse between the inhabitants, and the peculiar prejudices, customs, and habits of the Welsh at this day, favour the conjecture, that if the form or size of cranium of the ancient Britons can now be found, it will be in that country.

Before I conclude, allow me to make a few observations upon the supposed increase and decrease of the head at various periods of life after the age of maturity. As much difference of opinion exists upon this point, I trust I shall not be deemed presumptuous in differing from writers far my superiors in the science, provided I shew a consistency in my objections. An impartial Phrenologist is an admirer of truth. We have all the same aim: if we differ, nature alone will put us right. Upon my first acquaintance with the science, this subject, the increase in size at various periods, so strenuously insisted on by an experienced London Phrenologist, cast a damp upon my zeal in its favour. Since that time I have endeavoured to make every necessary inquiry which the interest of the science so justly demands, but cannot find one single well-attested fact to warrant me in supposing that the head does either increase or decrease after the period of full manhood; and that the apparent variation in size of the skull, which is, after such period, often observed, is to be ascribed solely to the integuments and hair. The time I have occupied this evening prevents my going much into particulars; but I have heard it stated of a certain learned judge, whose judicial knowledge was so enlarged, and practice so extensive, that his wig was no longer able to cover the necessary expansion of his skull! Alteration, splicing, or remaking, was the inevitable consequence, in order to render this said wig wearable. Nay, a Phrenologist has asserted, that, in one of the campaigns of Bonaparte, the increase of his soldiers' heads rendered their helmets useless; but, upon their return into winter-quarters, they assumed their former dimensions. If it were possible for such circumstances to occur, no experienced individual in the hatting trade could possibly doubt their consistency; but the reverse is the fact. My own experience has been to this effect:—That the heads of infants increase very rapidly the first and second years, the health and vigour of the child influencing the development. In the

first seven years the head attains an increase, from its birth, greater than in any seven years afterwards. It is needless for me to reply to the several objectors to phrenology, who assert that the brain attains its full dimensions at this period of life, and allege the increase afterwards to be caused by thickness of skull, hair, and integument. I can only say, that a great increase is observed in the head after the age of seven years, the cause of which I leave the explanation of to others more competent to decide than a hatter, who is satisfied with his circumference. From seven years the head undergoes a gradual increase until the period of maturity. Great increase is sometimes observed at particular periods, and likewise a total stand, for a length of time, is observed in different youths; but upon this, without a knowledge of the general health, and every circumstance likely to affect the activity of the brain, it would be imprudent in me to hazard mere conjecture. The head I have always found to attain its full dimensions in accordance with the bodily frame. I fix the utmost limit my experience will allow, at the age of 25 years. The more general period of full attainment of size is between 17 and 23. Many heads are at their full size at the age of 16; in confirmation of which I can appeal, not only to my own experience, but to every individual in the trade who has devoted himself to a just consideration of the subject, and also to a register of sizes kept for the last 25 years by one of the most extensive establishments in Bond Street, for the sole rule and guidance of its manufacturers; wherein are numbered the names of gentlemen of all grades of intellect, and men of all professions and pursuits, in the higher circles of society, where no apparent increase can be found to warrant a conjecture at variance with the opinion I have stated. The facts I could adduce, the names I could enumerate of individuals who have figured in the political world, and in the literary and scientific, would trespass too much upon your time. I shall appeal to one or two circumstances only. English gentlemen, upon their appointment to settlements in India, leave with their hatters the measurements of their heads before their departure from this country, and annual exportations are made of their several orders for ten, twenty, or thirty years, during their residence. No difficulty is found by the hatter in fitting; no increase is thought of. The body re-

turns sometimes emaciated; the head retains its usual size, saving the consequent decrease arising from the loss of integument or hair. At home, gentlemen residing wholly in the country, and others occasionally in town, never see their hatter for years, nor is it ever considered necessary, provided an accurate measurement of the head has been taken. If variation in size did take place, such a circumstance, from the numberless instances of strong excitement and increased action of the mental powers, would be easily manifested, and renewal of measurements must be continually necessary. The hatting trade in general would not be, as they now certainly are, entirely ignorant of the fact. But the subject cannot remain long a matter of doubt. The increased facilities of casting, the numerous characters in various situations of life which are now annually added to the catalogue of public and private collections, together with the interesting experiments, by a member of this Society, in taking the curves and circles of the head, will soon set aside all differences. I shall always be willing to exchange error for truth, and, with a sufficient confirmation of facts opposed to my present ideas, hail its dawn, and acknowledge myself benefited by the correction. L.

ON THE SIZE OF HATS USED BY THE DIFFERENT CLASSES OF SOCIETY. BY A HAT-MAKER OF DUNDEE.*

(To the Editor of the Phrenological Journal.)

DUNDEE, *June*, 1828.

SIR,—It is with much pleasure I perused a paper by a London hat-maker, in your Journal for November last; and as it appears from your preface that you are desirous of further observations on the same subject, and as I have been upwards of ten years in the same profession with your London correspondent, and have been necessarily led by observation to entertain the same ideas, I shall endeavour to supply you with a provincial corroboration of that gentleman's statements; trusting it may not be altogether unacceptable to the readers of your Journal, although found deficient in that freedom and eloquence which generally adorn its pages.

* Vol. v. No. 18, p. 213.

In assenting generally to the correctness of the observations contained in that article, I beg leave to notice one remark at the top of page 541,* where, after stating the manner in which hatters' measurement is given, the author says —"Upon this principle, blocks are used in the measuring and manufacturing of hats to particular sizes, varying from 5 inches, the size of an infant's head, increasing by the $\frac{1}{8}$ of an inch to $7\frac{3}{4}$ inches, the general full size of men." With respect to this latter observation, I beg leave to state, that in this part of the country, so far from $7\frac{3}{4}$ being the general full size of men, it may rather be regarded as the maximum; at least, in the course of my business I have met with very few demands for hats of that size; nor do I find, upon the strictest inquiry, it has been otherwise with the most extensive hatters and retailers of hats in this country: and, in point of fact, the cases are so rare, that, in a male population of about 18,000, not more than 10, if so many, require hats of a size from $7\frac{5}{8}$ to $7\frac{3}{4}$, although I know of two extreme cases of 8 inches being required. Nevertheless, a very perceptible difference in point of absolute size between those hats in general request among the higher classes of the community and those of the common and lower ranks, must be obvious to every hatter who may choose to pay the slightest attention to the subject. While we may state with safety $7\frac{1}{8}$ to be the medium size of the latter, we are quite certain of being within mark in stating the former to be $7\frac{1}{4}$; thus showing evidently the general size of the one class to be a degree larger than that of the other. It is no difficult matter to perceive that a head requiring a hat $6\frac{7}{8}$, hatters' measurement, is very small compared with one requiring $7\frac{6}{8}$; indeed the former is by the hatters here considered a boy's hat, and is very seldom required for an adult; nor is the latter size often required, as already mentioned. This will be readily believed by those who are aware that it would require a head equal in circumference to Dr Chalmers's to fit it. It is the ignorance of the vast difference that $\frac{1}{8}$ of an inch of hatters' measurement gives on the absolute size that causes so many mistakes about the general size of heads. Hence we are daily desired to send a hat half or even a whole inch larger than another specified, or are requested

* P. 160 of this volume.

to make this hat an inch larger, because it is too high; whereas $\frac{1}{8}$, or at most $\frac{1}{4}$, is all that is required.

Your correspondent, in speaking of the superiority of the Scotch head, in point of absolute size, over that of the English, recalls to my memory a circumstance which happened a number of years ago, and which shews that the fact is not unfamiliar to those who are in the practice of sending large quantities of hats to Scotland. An agent for one of the most extensive English houses was soliciting fresh orders, when my father observed, that he had just received a very large quantity from his house, which, from their small size, were quite unsaleable. When the sizes were mentioned, the agent observed, it was surprising the house should so far forget itself, being well aware such sizes would never do to send to Scotland. Observations which I have made since have fully confirmed the truth of these statements.

It is of some importance to observe, that it is the width of the head at the basilar region, and its extreme length from spine to Individuality, more than its absolute size, that determines the size of the hat. Our weavers afford a striking proof of this; their heads, generally speaking, are thin and high, which enables us to fit them with hats of a smaller size than some who have, in point of fact, smaller heads, but who, from having the greater part in the basilar and occipital regions, require hats of a greater width. It has often afforded me much pleasure to observe the striking correspondence between the form of the weavers' head and their mildness of character. I have heard this attributed to their circumstances; but I believe that fiery turbulent spirits, who find themselves unable to exercise that patient endurance so necessary to a weaver, either never enter the trade, or leave it after a very short trial. There are some who cannot believe otherwise than that good conduct must always be the result of necessity. No Phrenologist, however, would believe that, with Combativeness and Destructiveness large, they could manifest that patient endurance of privation which is one of their characteristics. Nor is the correspondence between the cerebral development and the manifestations of those with the other conformations alluded to less striking, although less pleasant to observe. It is the configuration that obtains among the lowest grades of so-

ciety here, such as our porters, carters, fish-drivers, and scavengers, from whom nothing but the most vigorous manifestations of animalism are to be found. Indeed, from all the observations I have been able to make, I am convinced that the situation of the individual in society is often an index to his development; at least, I often find the worst configurations in the lowest offices, although the reverse of this does not always hold good. But no one can justly regard the mere possession of that distinction which flows from wealth alone as the only criterion by which to judge of moral worth. A popular writer justly remarks, that "Nobleness of condition is not essential as a school for nobleness of character; nor does a man require to be high in office ere he can gather around his person the worth and the lustre of a high-minded integrity. It is delightful to think, that humble life may be just as rich in moral grace and moral grandeur as the loftiest places of society;—that as true a dignity may be earned by him who, in homliest drudgery, plies his conscientious task, as by him who stands intrusted with the fortunes of an empire;—that the poorest menial in the land who can lift a hand unsoiled by the pilferments that are within his reach, may have achieved a victory over temptation to the full as honourable as the proudest patriot can boast, who has spurned the bribery of courts away from him. It is cheering to know, that, among the labours of the field and of the work-shop, it is possible for the peasant to be as bright in honour as the peer, and have the chivalry of as much truth and virtue to adorn him."

This, phrenologically speaking, is often the case; for it is very conceivable that mild, and gentle, and unassuming individuals are easily

> "Checked by the scoff of pride, by envy's frown,
> And poverty's unconquerable bar;"

and this they have often to encounter from those who hold superior stations in society, which are as frequently gained by powerful propensities and intellect, as by a predominance of the intellectual and moral faculties. I have frequently considered it would be very desirable to take notes of the development of the different classes of workmen, and then notice their mechanical and moral manifestations. This I shall endeavour to accomplish as soon as my leisure

time will permit. Seamen, for example, have a character quite their own, and which, in the present state of my knowledge concerning their cerebral configuration generally, I am apt to consider is in a great measure the result of their circumstances. On board they may be said to be a community of equals, where Acquisitiveness and Secretiveness are less frequently called into activity, while the daily perils to which they are exposed, have a direct tendency to rouse their Adhesiveness and Benevolence in the rendering of mutual assistance; hence we find them open, generous, and affectionate,—strangers to that selfishness and dissimulation which are but too prevalent on shore. This, at least, so far as my observation goes, is the prevailing character of men bred from their earliest years to the sea-service; although there must be many exceptions in peculiar situations, and especially in time of war.

It would be easy to multiply observations such as the foregoing in various classes of society; but, being unwilling to trespass too much upon your indulgence in giving these remarks a place in your Journal, I shall conclude by subscribing myself your's, &c. T.

TWO REMARKABLE CASES OF SPECTRAL ILLUSION.*

The following very distinct and interesting narrative was read to the London Phrenological Society, and kindly communicated to us for insertion in the *Phrenological Journal*, by its learned author, a member of the English bar.

In December 1823, A. was confined to his bed by inflammation of the chest, and was supposed by his medical attendant to be in considerable danger. One night, while unable to sleep from pain and fever, he saw, sitting in a chair, on the left side of his bed, a female figure, which he immediately recognised to be that of a young lady who died about two years before. His first feeling was surprise, and perhaps a little alarm; his second, that he was suffering from delirium. With this impression, he put his head under the bedclothes, and after trying in vain to sleep, as a test of the soundness of his mind, he went through a long

* Vol. v. No. 18, pp. 210 and 319.

and complicated process of metaphysical reasoning. He then peeped out, and saw the figure in the same situation and position. He had a fire, but would not allow a candle or nurse in the room. A stick was kept by his side, to knock for the nurse when he required her attendance. Being too weak to move his body, he endeavoured to touch the figure with the stick; but, on a real object being put upon the chair, the imaginary one disappeared, and was not visible again that night.

The next day he thought of little but the vision, and expected its return without alarm, and with some pleasure. He was not disappointed. It took the same place as before, and he employed himself in observations. When he shut his eyes or turned his head, he ceased to see the figure; by interposing his hand he could hide part of it; and it was shown like any mere material substance, by the rays of the fire which fell upon and were reflected from it. As the fire declined it became less perceptible, and as it went out, invisible. A similar appearance took place on several other nights, but it became less perceptible, and its visits less frequent, as the patient recovered from his fever.

He says the impressions on his mind were always pleasing, as the spectre looked at him with calmness and regard. He never supposed it real; but was unable to account for it on any philosophical principles within his knowledge.

In the autumn of 1825, A.'s health was perfectly restored, and he had been free from any waking vision for nearly eighteen months. Some circumstances occurred which produced in him great mental excitement. One morning he dreamed of the figure, which stood by his side in an angry posture, and asked for a locket which he usually wore. He awoke and saw it at the toilet, with the locket in its hand. He rushed out of bed, and it instantly disappeared. During the next six weeks its visits were incessant, and the sensations which they produced were invariably horrible. Some years before, he had attended the dissection of the body of a woman in a state of rapid decomposition. Though much disgusted at the time, *the subject* had been long forgotten; but was recalled by the union of its putrescent body with the spectre's features. The visits were not confined to the night, but frequently occurred while several persons were in the same room. They were re-

peated at intervals during the winter; but he was able to get rid of them by moving or sitting *in an erect position.* Though well, his pulse was hard, and generally from 90 to 100.

A. is a person of good education and literary habits. I have not the slightest doubt of his veracity. He never supposed the appearances above mentioned other than illusions. He has always had a *propensity towards the supernatural,* without any belief in it; and he ascribes these effects of imagination to the perusal of the Tales of Wonder, and other ghost-stories, when a boy. He will not allow me to lay before the Society an account of his head, as connected with this statement, as he would not like to be called a dealer in the marvellous. I may, however, say, that Ideality is large, and the reflective faculties very good.

J. B. C.

It is evident that the author was not aware, when he wrote, of the cases recorded in our Journal, vol. ii. p. 290, and reprinted in the present volume of Selections, p. 57; especially of the light thrown, by the comprehensive instance of Miss S. L., on the nature and immediate cause of such illusions in the morbid activity, and of course internal action, sometimes but not always attended with acute pain, of the portions of the brain through which Wonder, Form, Size, Colouring, and often others of the knowing perceptions are produced. The communication is only the more valuable, that neither the author nor his informant A. can possibly be charged with suiting an instance to a theory; but have narrated appearances as they were experienced and described; and which, unknown to both, tally so exactly with the other instances to which we have alluded, as to leave no doubt of their being the effects of the same causes.

It is not said that local pain was felt by A.; but his pulse was from 90 to 100, and the brain evidently in over-excitement.* When such illusions occur to a patient quite conscious and rational, they are not imputed to the inter-

* He was relieved by holding the head in an upright posture. This was the experience of Miss S. L.; a proof of an internal mechanical cause, perhaps in the circulation or pressure of the blood, and almost suggesting a topical remedy, or alleviation.

nal excitement of delirium, but to an external object. Even Samuel Johnson is said to have believed in ghosts. It is a rare instance of reflecting power to treat a *real* perception,—for the *perception* is real,—as A. did, as a mental illusion.

We shall conclude the present paper, by relating a case not less remarkable than that above detailed:

Happening, on a very recent visit to the country, to be in company with Mrs D., the phenomena of spectral illusions chanced to be mentioned. Mrs D. took an especial interest in the discussion, as she had experienced both illusions and *local pain*. She gave that pointed and clear account of both which we should expect from a well-educated, intelligent, and candid woman. In her waking hours this lady was literally tortured with horrid faces glaring at her, and approaching close to her in every possible aggravation of horror. She was making a tedious recovery in childbed when these symptoms troubled her. Besides the forms, which were of natural colour, though often bloody, she was perplexed by their variation in size, from colossal to minute. Mrs D. had also entire human figures; but they were always as minute as pins, or even pinheads, and were in great confusion and numbers, indicating morbid action of Order and Number. Like Mr John Hunter, too, and the opium-eater, Mrs D. had illusive perceptions in that function of Weight which gives the perception of equilibrium, or just relation to gravitation. She was dreadfully annoyed with the sensation of descending without the means of stopping. The opium-eater experienced falling as if for millions of miles, and considered that illusion the most insupportable of the many horrible ones which punished the insane debauchery of his pernicious habit. The only other illusion suffered by Mrs D. was flashing light, shewing, as in Miss S. L., over-excited Colouring. The illusions did not, in her case, present entire spectres, recognisable as known individuals; but, like some of Miss S. L.'s and the opium-eater's, were visitations of what the latter calls "the tyranny of the human face."

Mrs D. then described the pain which *accompanied* her illusions, viz. acute pain in the upper part, or root of the nose, the seat of the organ of Form, and all along the eyebrows, which takes in Individuality, Size, Weight, Colouring, Order, and Number.

PHRENOLOGICAL ANALYSIS OF ELOQUENCE.*

Principal Campbell, in his work on the Philosophy of Rhetoric, which has long been and still is a standard guide, defines eloquence in its greatest latitude, "that art or talent by which discourse is adapted to its end;" and quotes Quintilian, "*dicere secundum virtutem orationis;—scientia bene dicendi.*" Dr Campbell admits that his definition is much more comprehensive than the common acceptation of the term eloquence, but, nevertheless, adopts it for two reasons: 1st, It is best adapted to the subject of his essays (scarcely a test of the *absolute* correctness of a definition); and, 2dly, It corresponds with Cicero's notion of a perfect orator, "*qui dicendo, animos audientium et docet, et delectat, et permovet.*" It is plain that Cicero does not warrant Dr Campbell's very extensive definition; for many a discourse is perfectly adapted to its end which neither instructs, nor delights, nor strongly moves. Cicero, however, calls that an eloquent discourse which, at one and the same time, does all the three; and, as will appear in the sequel, the Roman is more phrenological in his definition than the Scottish rhetorician.

Dr Blair adopts substantially Campbell's extensive definition. "To be eloquent is to speak to the purpose;" and "eloquence is the art of speaking in such a manner as to attain the end for which we speak." This elegant writer, however, soon limits his definition, which, he says, comprehends all the different kinds of eloquence, whether calculated to instruct, to persuade, or to please. But as the most important subject of discourse is action, the power of eloquence chiefly appears when it is employed to influence conduct and persuade to action. As it is principally with reference to this end that it becomes the object of art, eloquence may, under this view of it, be defined *the art of persuasion.*"

Eloquence, etymologically interpreted, is *speaking out;* in other words, raising the voice to harangue a multitude: and this its original characteristic has, by the figure of speech *senecdochè*, continued to give it a name, whatever degree of "image, sentiment, and thought," beyond what

* By James Simpson. Vol. v. No. 18, p. 165.

belongs to common discourse, from the howling appeal of the savage, through all the stages of reasoning and rhetoric, up to the impassioned yet clear and logical speech of the orator of civilization, is therein comprehended. But the name eloquence has been extended yet farther; it has been borrowed to distinguish a mode of composition and expression where there is neither haranguing nor speaking out; namely, that effusion of imagery and sentiment with which the poet exalts and enriches even his prose, and to which no orator ever reaches who is not a poet. "Song," says one of the masters, "is but the eloquence of truth;" truth to nature, in the widest, the most eloquent sense of that high term.

But the question recurs, What is eloquence in itself—it matters not whether written or spoken, said or sung,—as distinguished from all other kinds of discourse, each kind presumed fitted to its own end? The grand advantage possessed by a phrenological over every other test of the soundness of a theory on any point of anthropology, consists in its instant appeal to the primitive faculties of the human mind, to which faculties the whole of nature bears a definite and easily-observed relation. It is for want of such a guide that the theories, even of the most venerated leaders of the old school, vanish in vague generalities. When Campbell says that eloquence is either "instructive, imaginative, pathetic, or vehement;" tending "to enlighten the understanding, please the imagination, move the passions, or influence the will;" when Blair writes, that eloquence "either instructs, pleases, or persuades," which is a translation of Cicero's "*docet et delectat et permovet*," but with the disjunction instead of the conjunction; the reader who thinks phrenologically is left quite unsatisfied. He derives no definite idea from Campbell's enumeration; and on the strength of the phrenological fact, that every faculty of the mind is pleased in its own exercise, he is forced to reject Blair's distinction between teaching and pleasing as necessarily different things; for they are often most closely connected. Cicero avoids this error by using the conjunction; but even Cicero's view is indefinite. The phrenologist inquires, What is it to be instructed, to be pleased, or to be persuaded? It is to have certain of our primitive faculties in a certain way affected or excited; and a great step will

be gained when, dismissing such generalities as instruction, pleasure, and persuasion, we can say definitely, that eloquence is speech which is ultimately addressed to and excites certain of our primitive faculties in a certain way.

The faculties being all comprehended in the two classes of the intellect and the feelings, eloquence must be addressed to faculties in both or either of these classes. There seems no difficulty in now seeing our way. No one who has listened to true eloquence, or seen its effect on others, can for a moment doubt that it rouses *feeling;* and that speech which falls short of this effect is not eloquence, whatever may be its distinctive character and merits. But speech which does fall short of exciting any of the feelings must, nevertheless, of necessity put into greater or less activity the intellect of the hearer; in other words, furnish him with ideas, or add to his knowledge, and there stop. A prelection on the facts and phenomena of an inductive science, however it may delight the knowing faculties, is both delivered and heard with all the tranquillity of the intellect, and rouses nothing that can be called feeling. The same is true of logical deduction and mathematical reasoning addressed to yet higher intellectual faculties, the reflecting; these also are listened to without the least admixture of feeling. What, then, it may be asked, is the use to the orator of the intellectual faculties of his hearers? I would answer, Of such use, that he would speak in vain if his hearers had no intellectual faculties; but so he would if they had no sense of hearing: without the ears and without the intellect as the channels, the speaker could not reach the feelings. He must furnish ideas to rouse the feelings; but as the feelings do not form ideas, but merely and blindly *feel*, the speaker must approach them through the channel of the intellect. Now this is a distinction which phrenology alone clearly points out, and which removes the difficulty under which the rhetoricians of the old school labour. They make no distinction between addressing the intellect ultimately, and addressing the intellect as a medium of excitement of the feelings. When they speak of addressing what they vaguely call the passions, there is nothing in their words, nor in those of the metaphysicians on whose theories they found, to indicate that they even suspected that the passions must be addressed through the

medium of the intellectual faculties. It is therefore they hold, and hold erroneously, that one species of eloquence does no more than instruct. They mistake the address to the intellect as a channel to the feelings, for an address to the intellect as the ultimate object of the address, and conclude that there is an eloquence which instructs the intellect, and goes no farther. Whenever it does so, we may rely upon it, it possesses not one quality of eloquence. I by no means deny, that a discourse ultimately addressed to the intellect may have its own peculiar beauties of the highest order; I only contend, that these are something different from eloquence. It has been well said of Euclid's demonstrations, that in more, or fewer, or other words, or words otherwise disposed, they could not have been so well expressed. Such composition pleases; but it pleases intellectually, and moves no feeling. It has likewise been said of Playfair's mathematical expositions, that there is in them an exquisite adaptation to their purpose, which has induced some to call them eloquent. They give intellectual pleasure, but they stir not a single feeling; and therefore it is to misapply a term meant for another thing, to call them eloquent.*

If it be essential to eloquence to move the feelings of the hearer, it is no less essential that the same feelings should be active in the speaker, and be manifested by every means of manifestation. "*Si vis me flere, dolendum est primum ipsi tibi.*"

If we have now arrived at a distinctive idea of that thing called Eloquence, its definition follows naturally; namely, *speech, prompted by one or more of the affective faculties or feelings in vivid activity in the speaker, calculated to excite to vivid activity the same feelings in the hearers.* Cicero with much propriety uses the word *permovere.* Assuming, then, that the affective faculties are both the sources and the objects of eloquence, it obviously follows, that eloquence must exhibit varieties of character corresponding not only to the number of these faculties, but to their greatly

* An ingenious friend has suggested, that such admirably adapted discourses delight Ideality, which *feels* the exquisite and perfect. If they owe their beauty to this *feeling*, then on the present theory, they are so far eloquent. I am rather inclined, however, to think, that the intellectually exquisite pleases the intellectual faculties only, and that it is rather to extend the function of Ideality to admit its interference.

more numerous combinations. It were in vain to follow out the inquiry so minutely; and it is needless; inasmuch as a twofold division of eloquence, corresponding to the twofold division of the feelings into the propensities and the sentiments, will suit our present purpose. One license only I shall use, and include in the class of the propensities the lower and selfish sentiments of Self-esteem and Love of Approbation; a liberty this rather with phrenological classification than with experience; for these sentiments are, *de facto*, very close companions of the propensities, and never fail to characterize the lower species of eloquence. The propensities chiefly addressed by eloquence are Amativeness, Philoprogenitiveness, Adhesiveness, Combativeness, Destructiveness, Acquisitiveness, and Secretiveness. The eloquence of the sentiments comes from and is directed to Benevolence, Justice, Hope, Veneration, Ideality, and Wonder. Cautiousness and Firmness have a bicratic character, and may be found acting along with the propensities or with the sentiments, according to circumstances.

As Phrenology has established an ascending scale of dignity from the lowest propensities to the highest sentiments, we are at once furnished with a coincident meter to estimate the rank of the eloquence which springs from and is addressed to particular feelings. We are presented with a critical gauge by which we can determine, *a priori*, the kinds of eloquence which would respectively move savages, barbarians, civilized men of antiquity, and civilized men of modern times; for it is established phrenological doctrine, that these respective grades of advancement of human society, are terms convertible into others that express the corresponding degree of prevalence, in a given community, of the propensities or the sentiments. The propensities preponderating, we have barbarism; the sentiments, civilization. A speaker cannot manifest feelings which he himself very weakly or scarcely at all experiences; while it is equally plain that an audience cannot be moved unless feelings are addressed which they possess; and this is true not only with regard to different nations and different ages, but with regard to different classes of the same people. Witness the different character of speeches uttered on the same day in St Stephen's Chapel and in Palace-Yard. It is accordingly true, that we do

find the character of the eloquence of any tribe or nation precisely commensurate with its degree of civilization. We are in possession of specimens of savage eloquence—of barbarous eloquence—of ancient eloquence—and of modern eloquence, and I shall now proceed to compare them.

1. The eloquence of the savage addresses exclusively the propensities; and, applying the simplest and most palpable facts as the exciting cause, reaches the propensities by no higher intellectual medium than Individuality. In the very minute account of the Tonga Islands, given by Mariner, who was long resident there, we have several of the speeches of their warlike chief, Finou, and others of the natives. The chief of Vavaoo was assassinated with the connivance of Finou, and, as he lay dead, a young warrior, who believed his father had been killed by a conspiracy of the deceased's, rushed forward, and striking the body several times, thus apostrophized it:—"The time of vengeance is come! thou hast been long enough the chief of Vavaoo, living in ease and luxury; thou murderer of my father! I would have declared my mind long ago if I could have depended on others; not that I feared death by making thee my enemy, but the vengeance of my chief, Toobo Toa, was first to be satisfied; and it is a duty I owe the spirit of my father to preserve my life as long as possible, that I might have the satisfaction to see thee thus lie dead." He then repeated his blows several times. Savage Veneration and Adhesiveness mark this picture; but Self-esteem and Destructiveness form its strongest lights. Counter-revenge, of course, animates the harangue of the adopted son of the fallen chief, which is also given. Vengeance for the same murder calls forth a female orator, who taunts the men with their hesitation. I need not extract it.

2. The barbarian grade shows little or no improvement in moral feeling. The speech of Adherbal the Numidian, the brother of Hiempsal, who was murdered by Jugurtha, is preserved by Sallust; and is stated by that historian to have been poured forth to the Roman senate, to move them to assist him to *revenge* his brother's death, and dethrone the usurper. It is an effusion of unqualified ferocity and selfishness. After inveighing against Jugurtha with every epithet of vituperation, and painting *his own* wrongs as an exiled prince, with, of course, a full detail of his brother's gory wounds and bloody shroud, he thus con-

cludes:—"So far from having it in my power to revenge his death, I am not master of the means of securing my own life; so far from being in a condition to defend my kingdom from the violence of the usurper, I am obliged to apply for foreign protection for my own person. Fathers! Senators of Rome! the arbiters of the world! to you I fly for refuge from the murderous fury of Jugurtha. By your affection for your children, by your love for your country, by your own virtues, by the majesty of the Roman commonwealth, by all that is sacred, and all that is dear to you, deliver a wretched prince from undeserved, unprovoked injury, and save the kingdom of Numidia, *which is your own property*, from being the prey of violence, usurpation, and cruelty." This concluding adjuration was well suited to the Roman senate, and we all know the result; but it is evident, that in no part of it, with the exception of one allusion to Veneration, such as it was among the Romans, does the orator address a feeling of higher rank than the propensities and lower sentiments. The touch was skilfully added to the picture that Numidia was the Roman's own property; but, above every other part of the adjuration, that touch degrades at once the speech, the speaker, and the audience.

Livy has preserved or composed—it matters not which for our purpose—the speech of the elder Brutus over the dead body of Lucretia. This ferocious effusion is too well known to require to be quoted here.

3. The third stage of eloquence is found in that degree of civilization at which the Greeks and Romans arrived; namely, a high attainment of knowledge and advance in reflective culture, but still allied with a decided predominance of the animal propensities and lower sentiments. Perhaps there is no better test of the true level of character of those imposing communities, than is afforded by the kind of eloquence which suited them, respectively. That level is comprised in a word. They had advanced in Intellect, but stood still in Sentiment; they equalled the most accomplished moderns in philosophical acumen and didactic power, while they were but a little beyond the Tonga islanders in practical morality.

In the age of Pericles, the Athenians are held, by a sort of habit of opinion, to have been a highly-refined and civi-

lized people; but assuredly they were not civilized in moral feeling. Thucydides has preserved an oration spoken by Pericles, at the public funeral of the first Athenians who fell in the Peloponnesian war; which lengthened and useless bloodshed lies mainly at that orator's own door. After expressing a fear, not unfounded, that the *strangers* present might not assent to his high eulogies on his own countrymen, the orator, this hazard notwithstanding, launches out into the most extravagant praises of the Athenian bravery, of the Athenian government—borrowed by other states, but original at Athens—the grandeur of Athens, the elegant luxury of Athens, the *splendid* beneficence of Athens, the accomplishment of *all* Athenians—"I shall sum up what yet remains by only adding, that *our* Athens, in general, is the school of Greece; and that *every single* Athenian among us is excellently formed, by his personal qualifications, for all the various scenes of active life, acting with a most graceful demeanour." Then follows an effusion of ultra-extravagant exaltation of Athenian prowess and power. It needs no great phrenological skill to perceive that such dull nationality evinces nothing more than the activity to abuse of the inferior sentiments of Self-esteem and Love of Approbation. Then follows, as may be expected, an eulogy on those who died valiantly for such a country. They have various merits, but "one passion there was in their minds *much stronger* than these, *the desire of vengeance on their enemies.* Regarding this as the *most* honourable prize of dangers, they boldly rushed towards the mark to *seek revenge*, and then to satisfy those *secondary* passions."*

Such was the sum of Grecian virtue in the age of Pericles; and it never reached higher. When we contemplate the war, too, in which the heroes died, we find it one sought for and inflamed by Athens; carried on by her with injustice, cruelty, and pride; and ending in the most lamentable humiliation that ever visited such outrages on moral sentiment. The other orators of Greece—for they were a numerous corporation—sounded the same notes, all addressed to the war-making faculties; and it is curious that it was always an article in the demands of a successful enemy,

* These, and the subsequent extracts from ancient orators, are taken from Leland's translations.

that the orators should be delivered up to them; a proof that they were most justly considered as the grand exciters of the warlike propensities in so exciteable a people as the Athenians. It were tedious to cite examples from other remains which have descended to our time, but we cannot omit Demosthenes, who affords a specimen of the eloquence of Greece about a century after Pericles harangued, cheated, and ruined the Athenians. The speeches against Philip are manifestations of the highest *intellectual* power. They are models of political wisdom and just reasoning, with a fertility of resource for his country that must have greatly strengthened his reasonings, and his appeals to the reigning passions of his audience. With the intellectual merit of his orations we of course have nothing to do, farther than in so far as it confirms the position, that a people who are highly enlightened intellectually, may still be low in moral civilization. These able reasonings, which come through the channel of the reflecting faculties, attempt no higher region of the Athenian head than Cautiousness, Love of Approbation, and Self-esteem. They frequently stoop much lower, to Destructiveness, Combativeness, Acquisitiveness, and Secretiveness; but they never rise higher. "When, therefore, O my countrymen! when will you exert your vigour? When roused by some event? When forced by some necessity? What, then, are we to think of our present condition? To freemen, the disgrace attending our misconduct is, in my opinion, the most urgent necessity. Or say, is it your sole ambition to wander through the public places, each inquiring of the other 'What new advices?' Can any thing be more new than that a man of Macedon shall conquer the Athenians, and give law to Greece? 'Is Philip dead? No, but he is sick.' How are you concerned in these rumours? Suppose that he should meet some fatal stroke, you would soon raise up another Philip, if your interests are thus disregarded." After shewing, in many powerful ways, that the Athenians themselves were the cause of Philip's success, and again reproaching his countrymen for believing in idle rumours, instead of acting promptly and vigorously, he says: "Let us disregard these rumours; let us be persuaded of this, *that he is our enemy, that he hath spoiled us of our dominions*, that we have long been subject to his insolence; that whatever we expected to be done for us by others hath proved against us; that all

the resource left us is in ourselves; that if we are not inclined to carry our arms abroad, we may be forced to engage here. Let us be persuaded of this, and then shall we be freed from these idle tales. For we need not be solicitous to know what events will happen; we may assure ourselves that nothing good can happen unless you grant the due attention to affairs, and be ready to act as becomes Athenians." In these short quotations, we may say is comprised the germ of all the Philippics. It is amplified in various ways, and presented in many forms, and with the advantage of admirable logic; but the insult to the Athenian name is the head and front of Philip's offending, and is protruded at every point to the eyes of the multitude. It is impossible to conceive a more powerful appeal to Self-esteem, put in words, and to give it more exquisite point, concentrated in one phrase, than "that a Macedonian—a barbarian—should subdue Athens!" Athens, of whose estimate of herself the oration of Pericles may serve to convey some idea. No orator ever included more in a single expression than Demosthenes. "You would raise up another Philip," might be dilated into several sentences, but with what a loss of force and effect!

We shall search the orations of Demosthenes in vain for higher morality than we have now alleged to belong to them; therefore the high estimation in which they have been held for above two thousand years, must be looked for in some other qualities. On these all critics are agreed. He was, if possible, a more consummate *pleader* than even Cicero; his style had a kind of magic and music peculiar to itself, even in the impressive and sonorous Greek, quite beyond the power of translation or description. Even when he had not the best side of the question, his powers of rhetorical deception were unrivalled: his delusive reasoning, when employed, was not detected till it had already produced its effect; by means of subtle insinuation, he steered clear of committing himself by assertion; and he could put a meaning into silence itself more powerful than words could convey. Quintilian says of him, that he had a power of arraying his subject in majestic terror which alarmed and electrified, without stooping to aggravate, still less to exaggerate. The most prepossessed against the insolence and tyranny of Athens are hurried along as they read in

the original Greek a speech of Demosthenes against the presumptuous barbarian of Macedon; and share, even at this day, that jealousy, disdain, and impatience for action, with which the orator filled the bosoms of the Athenian multitude. Quintilian and Cicero are rivals in the eloquence with which they even describe the powers of Demosthenes; and the moderns have written volumes on that gifted being. But I will venture to say, that in all their pages *that* vital truth remains undiscovered—at least it is unnoticed—that the morality of his orations is not exalted, and that all the witchery of this syren of eloquence—as his rival Eschines called him from the melody of his language—was thrown away upon the baser passions of human nature. We do not require to take part in the controversy about his honesty, his gold cup from Harpalus, his alleged bribes from Persia, or his cowardice at Cheronea. Admitting his good faith, his eloquence would still want the essential element of oratorial supremacy, namely, an appeal to the moral sentiments.

We come now to Cicero, and in his eloquence we shall find the same excellencies and the same essential defect—a defect which stamps his rank in the scale of eloquence with that of Demosthenes, no higher than intellectually-civilized barbarism. The moral sentiments in their purity and supremacy are not found in Cicero; and even if they had influenced himself, they would not have commanded the sympathy of the Romans. It has often been remarked, that Cicero's orations are more agreeable to read than those of Demosthenes. This proceeds from their being higher efforts of literature, embracing a greater variety of subjects, and having a richer apparel of rhetorical ornament; but it is generally held that Demosthenes must have produced the most powerful effect on his audience. It is plain that it is loss of time to compare these two orators, or to decide their pre-eminence, when each was pre-eminent in his own way. The Greek was close, clear, terse, rapid, simple, majestic; the Roman was copious, correct, ornate, magnificent. The Greek carried the citadel by storm; the Roman took it after a regular and most beautifully-conducted siege. The pleading of the latter for Milo is one of the most perfect structures of circumstantial evidence which have in any age been addressed to a judge's ear. The chain, not only strong

but bright in every link, whereby he proves Clodius the intended murderer, and Milo the brave self-defender, gives evidence of intellectual accomplishment of the highest order; while, as he goes along, he artfully touches the *pride* and *vanity* of the Romans, and directs their *hatred* against Clodius. Pompey he *flatters*, and with great effect interprets the guards that were meant to overawe him into his intended and efficient protectors. But he speaks not to higher feeling; and when, in his peroration, he cannot avoid an appeal to benevolence and justice, which, he observes, bathed every face in tears, except that of the heroic disinterested Milo, there is an artifice, a getting-up, a scenic character about it, which speaks too plainly against the easy every-day excitement of these high feelings which we should find in the breasts of a more moral people. "By the immortal gods, I wish (pardon me, O my country! if what I shall say for Milo shall appear impiety to thee), I wish that Clodius not only lived, but were prætor, consul, dictator, rather than be witness to a scene like this. How brave a man is that, and how worthy of being preserved by you! By no means, he cries; the ruffian had the punishment he deserved, and let me, if it must be so, suffer the punishment I have *not* deserved. Shall this man, then, who was born to save his country, die any where but in his country? Shall he not at least die in the service of his country? Will you retain the memorials of his gallant soul, and deny his body a grave in Italy? Who will give his voice for banishing from this city, him whom every city on earth would be proud to receive within its walls? Happy the country that shall receive him! Ungrateful this if it shall banish him! Wretched if it shall lose him! But I must conclude; my tears will not allow me to proceed, and Milo forbids tears to be employed in his defence. You, his judges, I beseech and adjure, that in your decision you would dare to act as you think. Trust me, your fortitude, your justice, your fidelity will more especially be approved of by him, who, in his choice of judges, has raised to the bench the bravest, the wisest, and the best of men."

Nevertheless Milo was banished. Pompey's guards spoke Pompey's will in another sort of eloquence; and this skilful and brilliant appeal,—in which, although there is both fear and flattery, there is some right feeling, although much Secretiveness, yet some justice and mercy,—found no justice,

no fortitude, no fidelity, in the already enslaved Forum of Rome.

Cicero's accusation of Verres, who had been proconsul of Sicily, a monster of injustice and cruelty, who might challenge comparison with the choicest, either in republican or imperial Rome, is throughout, as it could only be, a torrent of accusations, details of enormities, with their clear proofs, and loud, and indignant, and destructive cries for punishment. The climax is, however, topped with an appeal to Roman Self-Esteem, even in such a case as this. Gavius Cosanus had been bound, scourged with rods, and crucified, merely for asserting his privilege of Roman citizenship. This is sufficiently shocking; but Cicero's chief horror is, that Cosanus was a Roman citizen! "O liberty! O sound once music to a Roman ear! O sacred privileges of Roman citizenship! once sacred! now trampled upon! Is it come to this? Shall an inferior magistrate, who holds his power from the Roman people, within sight of Italy, bind, scourge, torture with hot irons, and at last put to the infamous death of the cross, a Roman citizen! Shall neither the cries of innocence expiring in agony, nor the tears of pitying spectators, nor the majesty of the Roman commonwealth, nor the fear of the justice of his country, restrain the wanton cruelty of a monster, who, in confidence of his riches, strikes at the root of liberty, and sets mankind at defiance?"

May not the thunder of Cicero, and the example of Verres, have increased, all over the empire, that dread of scourging, or even binding a Roman citizen, which alarmed the chief captain who had bound St Paul, in ignorance of his privilege?

The storm from Cicero's lips which burst upon the head of Catiline, when he impudently entered the senate, in the belief that he was yet undetected, has, as a storm, certainly no equal in the history of oratory. In a harangue reproaching a wretch like Catiline, there can scarcely be a nook where the higher sentiments can find shelter. The eloquence of high feeling would as little have suited Cicero's overwhelming denouncement of such a criminal, as it would in our day suit Bow Street and the Old Bailey. It is needless therefore to swell this paper, which threatens to be so long, with specimens from that unmitigated roll of thunder, which, while it carried the propensities, the whole animal

brain, to fever and frenzy, broke on a lower region than the seat of mercy, piety, poetry, and hope; like the war of clouds we have seen midway below, when we have reached the clear and serene region of the mountain's summit.

Cicero spent his exile in Greece (for which of their benefactors did not the true barbarians of Rome, as well as of Greece, capriciously exile, and sometimes as capriciously restore?) in studying the various systems of Greek philosophy. He came back warm from the Porch, a professed, if not a real Stoic. Indeed, where is the example of any of these vague and impracticable theories really influencing a single Greek or Roman to a course of conduct which the higher sentiments would approve? The leaven of that mixture of benevolence and pride, the Stoic philosophy, it has been observed, tended to refine his writings more than his speeches. Had he addressed Stoics in the Senate, the Forum, or the Campus Martius, his speeches would not have been suited to his audience. But it is just because the voluptuous, selfish, and cruel Romans had no sympathy with the human sentiments, that he found himself constrained to limit his address to the reigning inferior feelings. Even when he appeals to justice, to generosity, to compassion, as he did for his old preceptor, the poet Archias, the offering is debased by so large a proportion of the garbage which is the proper food of vanity and pride, that there is a positive profanation of the first-named elements, in placing them in such alliance. "Nor ought we," says Cicero, and it forms the key-note of his pleading, "to dissemble this truth, which cannot be concealed, but declare it openly; we are all influenced by the love of power, and the *greatest* minds have the greatest passion for glory."

So far Cicero; and so high, but no higher, Roman virtue.

4. We come now to the civilization of modern times, which excels that of Greece and Rome, much less in its intellectual, than in its moral qualities. Christianity has wrought this; Christianity from the Reformation; for it was previously abused, in the grossest manner, in the service of the propensities. It is a revelation of the supremacy of the moral sentiments. It came when the earth reeked with blood, when all was selfishness and cruelty. Its first voice on earth was "Fear not;" its first promise, "Peace and good-will to men." It teems, in every line and every

precept, with the essential benevolence of its Author. It has done much to mitigate the selfishness of the propensities; and it is only another proof of the strength of these, that it has not done more. But justice and good-will and veneration are now the foundations of many modern institutions; although still there is much to do; at least, however, these feelings are exercised, and there is an acknowledged delight in exercising them. They are recognised quite sufficiently for the purposes of the orator, and are the foundations of the highest rank of eloquence.

I wish it could be said with truth, that all modern oratory were addressed to the higher sentiments. Many a harangue in the British senate is disfigured by the propensities yet; many an oration on glory, and victory, and vengeance, we yet hear; many more advocating national monopoly and individual selfishness, and not a few expounding and defending diplomatic cunning, lamentably mistaken for political wisdom. Nay, it should make a son of Britain blush to narrate it, we have heard many a speech of sordid Acquisitiveness and hard-heartedness, when not only mercy, but sound policy, cried aloud on the other side of the question. Into such speeches, if the present theory be just, we need not look for specimens of eloquence. It would be a moral solecism to do so. But the higher sentiments assert their supremacy in many a speech in the British parliament, and do irradiate the orator's brow with their own proper glory, a glory which never shone on the orators of ancient times. Perhaps the most ample scope for the eloquence of the higher sentiments ever offered to a deliberative body, was afforded to the British parliament, and nearly about the same time, by India and Africa. The independence of America had just been wrung from England, and the lesson thereby taught her, that the physical and moral laws of nature will not bend to a senseless national pride. The most enduring fame of Chatham was founded on the splendid manifestations of the higher sentiments which characterized his appeals in behalf of the injured Americans, contrasted with the paltry selfishness, pride, and petulance of his opponents, who thought it became a great people to persevere in injustice because they had begun, and redounded to the national honour to continue a contest, which for years had brought nothing but defeat and disgrace. The present age could not tolerate the puerile bra-

vadoes and senseless nationalities which were vented in parliament, not only in occasional effusions, but systematically by the ministers of the crown, as the *reasons* for prosecuting the war, in the seventh year of defeat, and a victorious French army actually in America. Events, however,—in other words, the Creator's Eternal Will, that injustice shall not prosper,—had settled the question. The belligerent generation were forced to swallow the bitter potion of moral humiliation; and their successors, who had none of the blame, now reap the benefit.

There was then time to look to the East, which, forgotten while all the selfish passions took the direction of the West, presented a picture of misgovernment quite unequalled in modern times. Enormous fortunes were amassed, or rather conjured up, in four or five years, by young men; who returned home young men to enjoy them. There was then not that degree of reflection or of light in the public mind to raise the slightest suspicion that such sudden wealth could not be honestly come by; that no adequate value could be given by a half-educated boy in the situation of a resident at a native court, for the half million with which he returned to England; and that India, no more than other places, is paved with gold, but depends for its riches upon its agriculture and manufactures. While there was thus no sort of check upon public men in public opinion, it would appear incredible to the present generation, in which the sentiments have made a very considerable advance, not only what things were done, but systematically done, in the last, as allowable and sagacious policy, by every department of the government, from the first lord of the treasury down to the excise watchman at a soap-boiler's or a distillery. No! the jobbing, the oppression and extortion, the knavery, treachery, and falsehood, which were thought to be the very essence of clever policy, the grosser outbreakings even of which were sure to be screened by a vote of the legislature itself, would not now be believed. In treaties with the native powers in India, what were called "vague articles" were inserted systematically, as dexterous and laudable strokes of policy, whereby the nullity of the whole treaty was meant to be produced.

Mr Burke, in his memorable speech on Mr Fox's India bill, pledged himself, in parliament, to establish, and did

establish, three positions: 1st, That the India Company had *sold* every prince, state, or potentate with whom they had come in contact; 2d, That there was not a single treaty ever made by them which they had not broken; and, 3d, That there was not a single prince that ever put trust in the Company who was not utterly ruined; and that none was in any degree secure or flourishing, but in the exact proportion to his settled distrust of and irreconcilable enmity to the English name.

As it was the prevalence of the propensities that produced all this, the evil could yield only to powerful and incessant appeals to the higher sentiments. The former class of feelings were yet too strong to give a chance for immediate improvement, and votes on votes cleared the guilty, and thereby sanctioned the abuses. But the seed was cast into the earth—and let this ever encourage the upright legislator—the mustard-grain of justice and mercy was then sown, which now, like a great tree, shelters India from scorching oppression, and protects every family of her vast population. No more rapid fortunes! No more evasive treaties! No more plunder! No more of the insolent oppression of barbarous conquerors!

But the pestilence was rife when Burke directed his splendid eloquence against it. Quotation of isolated passages from his speech on the India Bill can neither do that fine effort of oratorical talent justice, nor illustrate satisfactorily the doctrine of this paper. The whole speech must be read to impress on the mind the superior sentiment which pervades it, and gives it a resistless moral force over all who are blessed with even an average endowment of moral feeling.

Nothing can be finer than the passage in which the orator prefers the Tartar to the English conquest of India; and adds, "Animated with all the avarice of age, and all the impetuosity of youth, they (the English) roll in one after another, wave after wave, and there is nothing before the eyes of the natives but an endless, hopeless prospect of new flights of birds of prey and passage, with appetites continually renewing for a food that is continually wasting."

The orator sketches rapidly, but powerfully, the demoralizing effect, even on young men of worth, of the means then held legitimate for amassing sudden and princely

wealth, and the change of character to social virtue, on doubling the Cape homewards. "Here the manufacturer and husbandman will bless the punctual hand, that in India has torn the cloth from the loom, or wrested the scanty portion of rice and salt from the peasant of Bengal, or wrung from him the very opium in which he forgot his oppressions and his oppressor." After showing the difficulty of a reform, arising from the deep-rooted and wide-spread interests it would affect, he says, "You hurt those who are able to return kindness and resent injury, while you save those who cannot so much as give you thanks. All these things show the difficulty of the work, but they show its necessity too." Certainly nothing approaching to the exalted tone of justice and benevolence which pervades the whole of this speech was ever addressed either to the mobs or the councils of antiquity.

I am forced to refer to Mr Fox's published speeches for his share in the same animating debate.

The concern felt by Britain for her Asiatic subjects indicated a great advance of justice and mercy; but still the inhabitants of Hindostan were the subjects of Britain, not utterly beyond the sphere of her sympathies, and in some measure associated with her interests. But justice and mercy to Hindostan yielded in high character to justice and mercy to Africa; in the feelings and happiness of whose sable population Britain had no direct interest beyond the claims of pure benevolence and justice. It was a grand moral spectacle, a nation coming forward and confessing a national crime; vowing its cessation, and offering the most generous reparation. Greece and Rome have nothing in their history like this national manifestation of the supremacy of the moral sentiments. When Wilberforce achieved an immortal name by his magnificent position, "that the slave-trade is contrary to justice, humanity, and sound policy," what aspirations of oratorical distinction, what ambition to manifest the higher sentiments, arrayed in all the pride and grace of human speech, must he not have excited in many a generous bosom in that memorable senate! Mr Fox's speech may be called a torrent of indignation at the impudent selfishness and injustice, and the merciless cruelty of the slave-trade. For this also we must refer to his published speeches.

But no oration for the abolition surpassed Mr Pitt's, delivered on the 2d of April 1792, in the power and splendour of the higher sentiments. It has been called insincere, because he did not follow it up with his paramount ministerial influence, and *carry* the measure he so eloquently advocated. It has been defended, and well defended, on the ground that it should never be said, that the selfish feelings of political subserviency should have any share in a vote which should be the spontaneous offering of the nation's representatives in the nation's name. None can read the speech and for an instant believe it insincere. But, at any rate, that question has no place here; for, even were the speech separated from the speaker, it is an oration throughout addressed by the highway of the reflecting powers to the noblest feelings of human nature. I can only afford room for its conclusion.

"If we listen to the voice of reason and duty, and pursue this night the line of conduct which they prescribe, some of us may live to see a reverse of that picture from which we now turn our eyes with shame and regret. We may live to behold the natives of Africa engaged in the calm occupations of industry, in the pursuits of just and legitimate commerce. We may behold the beams of science and philosophy breaking in upon their land, which at some happy period, in still later times, may blaze with full lustre, and, joining their influence to that of pure religion, may illuminate and invigorate the most distant extremities of that vast continent."

Our own immediate day finds no falling off in the high-toned eloquence of the sentiments. I cannot withhold one instance, the magnificent peroration of Mr Brougham's late speech on the state of the law of England; and I am glad to be able to show, by means of the reports, not only the orator's manifestations, but those of his hearers, from the reported effect upon them of the climax of benevolence and justice which he brought to bear upon them.

"A great and glorious race is open before you; you have it in your power to make your names go down to posterity with the fame of more useful importance attached to them than any parliament that ever preceded you. (*Cheers.*) You have seen the greatest victor of the age, the conqueror of Italy and Germany, who, having achieved triumphs

more transcendent than any upon record, said, 'I shall go down to posterity with the *Code* in my hand.' (*Loud cheering.*) You have beaten that warrior in the field—try to rival him in the more useful arts of peace. (*Cries of hear, hear.*) The glories of the regency, gorgeous and brilliant as they were, will be eclipsed by the milder and more beneficent splendour of the king. (*Great and continued cheering.*) The flatterers of the Edwards and the Henries compared them to Justinian; but how much more justly may it not be applied to our own sovereign, when to his other glories this shall truly be added. (*Cheers.*) It was said by Augustus, that he found Rome of brick and left it of marble—an honourable boast, and one which veiled many of the cruel and the tortuous acts of his early course;—but how much higher and prouder would be the boast of our king, to have it said, that he found law dear and left it cheap,—(*cheers*),—that he found it a sealed book, and left it an open letter,—that he found it the patrimony of the rich, and left it to the security of the poor,—that he found it a two-edged sword in the hands of the powerful, and left it a staff for the comfort of the feeble and the friendless.—(*Loud and long-continued cheering.*)"

There remains yet another eloquence, which appeals to a yet loftier combination of the human sentiments than the speaker at the bar or in the senate is almost ever called to address; an eloquence utterly unknown to the ancients, and beyond all question paramount among the moderns—the eloquence of the Pulpit. There are stops in the human instrument upon which the pleader or the senator rarely lays his hand; but the preacher is familiar with the whole compass, and falls short of the spirit of his message, if he fail to avail himself of the entire of its magnificent capacities. If he mellow not the firm touch of Justice with the full swell of Benevolence; if he temper not the note of Fear with all the melody of Hope; if he wake not the loud peal of Wonder, or give not their turn to the milder and richly-varied harmonies of Ideality; if, in fine, he dwell not on the solemn key of Veneration, to which all the other harmonies respond as the regulating diapason of all their combinations, till the breathless listener thrills in every nerve, and sheds the pure tear of elevated humanity; if he fail in aught of these, the preacher does not

command the whole range of that lofty vantage-ground, the pulpit.

When we attend to the misdirected and spurious Veneration which here and there deforms an oration of antiquity, it is at once clear to us that the deep feeling of *genuine* Veneration is a grand addition to the structure of modern eloquence, and the chief corner-stone of that edifice of progression in excellence, which it is the purpose of this paper to develope. Veneration is the very fulcrum of that lever which the preacher wields; and it is a power all his own, which, added to his command of all that other orators employ, gives its ascendency to his over all other discourse. From Veneration emanates the eloquent solemnity of his prayers, the power of his adjurations and appeals, and all that stillness and awe which directs every eye heavenward, as if the Creator himself were speaking through his gifted servant. "When the Master speaks," said Massillon, as a thunder-storm almost drowned his voice, and he paused till one peal had passed, only to pause again as another rolled on; "When the Master speaks," said he, during an interval of death-like stillness, "it becomes the servant to be silent." No one endowed with an average portion of the faculty can hear this, and require to ask what is the eloquence of Veneration; that eloquence which at once lifts the soul to God's throne, and humbles it at his foot-stool; points to Omnipotence, and then marvels what is man that Omnipotence "is mindful of him, and deigns to visit him!"

This paper is already too long for either extended or numerous specimens of pulpit-eloquence, as varied by the sentiments or combinations of sentiments addressed. A very few from Chalmers shall suffice. As he avails himself of the *whole* powers of the pulpit, and to a pitch not exceeded by any speaker in any other field of eloquence, on the principles on which the analysis is built,—notwithstanding settled notions and great names, both of which Phrenology is apt to weigh,—I am led to estimate his composition more highly than that of any orator of whom I have yet spoken.

There is an eloquence of Ideality, and of Ideality and Wonder, distinct from the eloquence of the other sentiments. Some speakers are, by their organization, deter-

mined to the one and not to the other; but Chalmers, although he sometimes appears to address Ideality alone, or with Wonder combined, without the other sentiments, is virtually combining all the sentiments, and producing the deepest moral and religious effect by the union. Of Veneration, as the key-note, he never loses sight. Although Ideality, for example, predominates, Benevolence, Hope, and Veneration beam forth in every thought of the following beautiful conclusion of a discourse on "the expulsive power of a new affection," in which the preacher shows the insufficiency of arguments drawn from the common topic of this world's worthlessness, and the necessity of offering another, distinct, and much higher attachment:

"Conceive a man standing on the margin of this green world; and that, when he looked towards it, he saw abundance smiling upon every field, and all the blessings which earth can afford scattered in profusion throughout every family; and the light of the sun sweetly resting upon all the pleasant habitations, and the joys of human companionship brightening many a happy circle of society; and that on the other side, beyond the verge of that goodly planet, he could descry nothing but a dark and fathomless unknown. Think you that he would bid a voluntary adieu," &c. "But if, during the time of this contemplation, some happy island of the blest had floated by, and there had burst upon his senses the light of its surpassing glories, and its sounds of sweeter melody; and he clearly saw that there a clearer beauty rested upon every field, and a more heartfelt joy spread itself among all the families; and he could discern there a peace, and a piety, and a benevolence, which put a moral gladness into every bosom, and united the whole society in one rejoicing sympathy with each other, and with the beneficent Father of them all. Could he farther see that pain and mortality were there unknown, and, above all, that signals of welcome were hung out, and an avenue of communication was made for him; perceive you not that what was before the wilderness would become the land of invitation, and that now the world would be the wilderness? What unpeopled space could not do, can be done by space teeming with beatific scenes and beatific society. And let the existing tendencies of the heart be what they may to the scene that is near and visibly around us, still, if

another stood revealed to the prospect of man, either through the channel of faith or the channel of his senses, then, without violence done to the constitution of his moral nature, may he die unto the present world, and live to the holier that stands in the distance away from it."

Ideality and Wonder, seasoned with Cautiousness, and finely sustained by Veneration, unite to shed a glory altogether peculiar around those exciting productions, the Astronomical Sermons, which, when delivered, wound up these engrossing feelings to rapture, in a crowded audience, in which mingled a large portion of the rank, the talent, and the taste of the land.* After expatiating in terms of the sublimest eloquence on the *immensity* of creation as revealed by the Telescope,—eighty millions of fixed stars, and every star a sun with its retinue of planets; and what is discovered, baffling imagination as it does, being in all probability a relatively insignificant part of the suns and systems that roll in infinity; so insignificant, that it might be annihilated without being missed in creation,—the orator changes the direction of his hearers' Wonder, and, by a magic word, unfolds the yet more bewildering theme of the *minute* in creation, unfolded, and inferred to be infinite, by the discoveries of the Microscope! It is said by those who heard him, that such was the delight excited by the prospective grasp, which every mind took in, of a creation yet to be displayed, when the microscope was announced, that the solemnity of the place alone restrained a shout of applause. The pin-fall silence was for an instant broken by the stir of a new and unexpected and most intense emotion, and all was again still and breathless attention. "About the time of the Telescope's invention, another instrument was formed, which laid open a scene no less wonderful to reward the inquisitive spirit of man. This was the Microscope. The one led me to see a system in every star; the other leads me to see a world in every atom. The one taught me that this mighty globe, with the whole burden of its people and of its countries, is but a grain of sand on the high field of immensity; the other teaches me that

* The substance of these discourses formed a sermon preached before his Grace the Lord High Commissioner to the General Assembly; the Judges, Barons, and other public functionaries present.

every grain of sand may harbour within it the tribes and the families of a busy population. The one told me of the insignificance of the world I tread on; the other redeems it from all its insignificance; for it tells me, that in the leaves of every forest, and in the flowers of every garden, and in the waters of every rivulet, there are worlds teeming with life, and numberless as are the glories of the firmament. The one has suggested to me, that beyond and above all that is visible to man, there may be fields of creation which sweep immeasurably along, and carry the impress of the Almighty's hand to the remotest scenes of the universe; the other suggests to me, that within and beneath all that minuteness which the aided eye of man has been able to explore, there may be a region of invisibles; and that, could we draw aside the curtain which shrouds it from our senses, we might there see a theatre of as many *wonders* as astronomy has unfolded; a universe within the compass of a point so small as to elude all the powers of the microscope; but where the *wonder*-working God finds room for the exercise of all his attributes; where he can raise another mechanism of worlds, and fill and animate them all with the evidences of his glory."

The favourite sentiment of the lofty and generous mind of Chalmers is Benevolence; and he loves to accompany it with all the beatitudes and buoyances of Hope. Infinitely varied by the endless illustrations and amplifications of his inexhaustible genius, surrounded and aided and exalted by the brilliancy of all the other sentiments, Benevolence is the most cherished inmate of his bosom, and out of its fulness his mouth speaketh the most eloquently. Kindliness, gentleness, and mercy, are held by him to be the only irresistible engines of man's power over man. A debate on a question where feeling ran high had been conducted and concluded in the General Assembly of the Church of Scotland, with that mutual forbearance and courtesy which, of all men, most become divines. The feeling expanded in its most fitting receptacle the heart of Chalmers; and, with a flight of Ideality too high for any wing but his own, he thus burst forth, in peroration of a splendid tribute to his favourite sentiment: "Were there, Moderator, between that side of the house and this a wall of brass, fifty cubits high and fifty cubits broad, give me the courtesy and the

kindliness of benevolence, and I will overleap it or undermine it."

But the highest application of his principle of the power of gentleness that gifted preacher reserved for the contemplation of the votaries of religious zeal. Polemical controversy had run high in the north of Ireland, and the *odium theologicum* had, with its baleful influence, gone far to stifle all the charities of neighbourhood, when Chalmers appeared at Belfast; and, at the opening of the Presbyterian chapel there, the disputants and their partisans flocked to listen to the most powerful preacher the world has yet seen, as he gave forth for his text the invaluable precept, "The wrath of man worketh not the righteousness of God."

To illustrate "the way in which the great message from heaven to earth may be darkened, and altogether transformed out of its native character by the conflict and controversy of its interpreters," he takes the analogy of a message of free and unqualified kindness from some earthly superior, handled by the bearers of it in the same way. The message of good-will is, moreover, put in writing for greater security; but this intended advantage raises up "a whole army of expounders," who, "in the pride and heat and bitterness of argument, fall out among themselves," to the utter destruction of the mild and merciful embassy of peace by which the contentions are stirred, and who pervert it, each to a message of vengeance on all who do not interpret it precisely as he does. "It is thus," he continues, "that, by the angry and lowering passions of these middlemen, an obscuration might be shed on all the goodness and the grace which sit on the brow of their superior; and when stunned, in the uproar of their sore controversy, with the challenge and the recrimination and the boisterous assertion of victory, and all the other clamours of heated partisanship, that these may altogether drown the soft utterance of that clemency whereof they are the interpreters, and cause the gentler sounds that issue from some high seat of munificence and mercy to be altogether unheard."

After shewing the undoubted character of benevolence, of mercy, and of love to man, with no limitation of men, with which the Christian message is fraught, all which is "*asserted*" in its very terms, the preacher continues, after his manner of rich amplification, to contrast this serene and

kindly and inviting aspect with the cloudy turbulence and forbidding frown of sectarianism.

" It is thus that the native character of Heaven's message may be shrouded, at length, in subtle but most effectual disguise, from the souls of men; and the whole spirit and design of its munificent Sovereign be wholly misconceived by his sinful, yet much-loved children. We interpret the Deity, by the hard and imperious scowl which sits on the countenance of angry theologians; and in the strife and the clamour of their fierce animosities, we forget the aspect of Him who is on the throne, the bland and benignant aspect of that God who waiteth to be gracious." Dr Chalmers expresses his regret, " that men of highest respect in the Christian world have done grievous injury to the cause;" that Calvin himself incalculably weakened his own power, by declaring the message of mercy, " not in the spirit of gentleness, but in the spirit of an incensed polemic, and with that aspect which sits on his pages of severe and relentless dogmatism." That violence " and vituperation by which his institutes are so frequently deformed, never occur, we venture to affirm, but with an adverse influence on the minds of his readers, in reference to the truth which he espouses. In other words, that truth which, when couched in the language and accompanied with the calls of affection, finds such welcome into the hearts of men, hath brought upon its expounders the reaction of a stout indignant hostility, just because of the intolerance wherewith it has been proposed by them."

" Let us lift ourselves," he proceeds, " above these turbid elements of earth, and be firmly and erectly confident of benevolence in heaven. Yonder is the region of light, and of undoubted love; and whatever the mist or the darkness may be of this lower world, there is free, generous, unbounded welcome to one and all in the courts of the Eternal. The sun of our firmament is still gorgeously seated in fields of ethereal beauty and radiance, when veiled from the sight of mortals by the lowering sky that is underneath. And so of the shrouded character of the Godhead, who, all placid and serene in the midst of elevation, is often mantled from human eye by the turbulence and terror of those clouds which gather on the face of our spiritual hemisphere." " There may be nought to gladden in

the wrathful and the warring controversies of the men who stand betwixt us and heaven, but in heaven itself are notes of sweeter and kindlier melody; and well may we assure ourselves of the gratulation that is awakened there over every sinner who turns to God." "In a word, it is when the bearer of this message from God to man urges it upon his fellow-sinners in the very spirit which first prompted that message from the upper sanctuary,—it is when he truly represents, not alone the contents of Heaven's overtures, but also that heavenly kindness by which they were suggested,—it is when he entreats rather than when he denounces, and when that compassion, which is in the heart of the Godhead, actuates his own,—it is when, standing in the character of an ambassador from him who so loved the world, he accompanies the delivery of his message with the looks and the language of his own manifest tenderness,—it is then that the preacher of salvation is upon his best vantage-ground of command over the hearts of a willing people; and when he finds that charity, and prayer, and moral earnestness have done what neither lordly intolerance nor even lordly argument could have done, it is then that he rejoices in the beautiful experience, that it is something else than the wrath of man which is the instrument of working the righteousness of God." "It was in love to man that this wondrous dispensation was framed. It was kindness, honest, heartfelt, compassionate kindness, that formed the moving principle of the embassy from heaven to our world. We protest, by the meekness and the gentleness of Christ, by the tears of Him who wept at Lazarus' tomb, and over the approaching ruin of Jerusalem; by every word of blessing that he uttered, and by every footstep of this wondrous visitor over the surface of a land, on which he went about doing good continually,—we protest in the name of all these unequivocal demonstrations, that they do Him injustice who propound his message in any other way than as a message of friendship to our species. He came not to condemn, but to save; not to destroy, but to keep alive. And he is the fittest bearer, he the best interpreter, of these overtures from above, who urges them upon men, not with wrath and clamour, and controversial bitterness, but in the spirit of that wisdom which is gentle and easy to be entreated, and full of MERCY."

It were to weaken the effect of such glorious manifestations of the highest sentiments of humanity, such truly Christian exclusion of the *propensities* from the holy ground of religion, to make a single comment upon them. Set them but in contrast to the harangues of the Tonga Islanders, nay of the Greeks and Romans, and the theory of eloquence attempted in this paper is complete.

It was soon discovered, that the views now submitted were far indeed beyond the limits of an essay. Selection and exclusion, in the mass of matter that offered, were the chief difficulties. The compass of the subject is immense, and involves, I would say, a revolution in the whole kingdom of literature; for it presents an instrument of criticism which will work with the precision of the mathematics, and bid away from its presence all the vague and inconsistent verbiage which has hitherto passed by that name. Nay more, it may and will indirectly produce the most important moral effects on society, by adding to the practical efficacy of that chief glory of Phrenology, the doctrine of the Supremacy of the Moral Sentiments.

ADDITIONAL REMARKS ON DR THOMAS'S THEORY OF THE TEMPERAMENTS.*

We stated in a former paper,† that, by a new application of the universal principle, of size in an organ being a measure of its energy of function, Dr Thomas of Paris had succeeded in developing a rational, and, as to us it seemed, most important theory of the temperaments; thereby solving, in a clear and consistent manner, what had been so long felt as a hiatus in medicine and in philosophy, and what had been so long a stumbling-block to the most zealous cultivators of mental and moral, as well as of physiological and medical science.

Since that time we have very often tried Dr Thomas's views by the test of experience, and have not hitherto met with any exception, but, on the contrary, have found them singularly felicitous in throwing light upon some previously obscure cases, and of great value in estimating the relative

* By Andrew Combe, M. D.—Vol. iv. No. 16, p. 604.

† See page 125. of the present volume.

activity of the nervous system in different constitutions; and it is the conviction of their great practical importance that leads us to press them again on the attention of the reader. That they have been partially appreciated is evident from some of our best newspapers—such as the *Scotsman*, the *Morning Chronicle*, and the *Englishman*—having copied them from our pages; but that they are not yet sufficiently known is obvious, from their still remaining unnoticed in most of the medical and literary journals of the kingdom.

Dr Thomas's principle is simply, that as size is a measure of power, and as the whole system is made up of the nervous, the sanguineous, and the digestive apparatuses, contained respectively in the head, the thorax, and the abdomen, so will the natural constitution differ in proportion to the relative equality or predominance of all or any of these three great divisions. Thus, a great size of brain and head, with small thorax and abdomen, will give a constitution characterized by a necessary predominance of the cerebral over the thoracic and abdominal functions, viz. great nervous energy, activity, and force of mind, with little aptitude for muscular efforts, and rather weak digestion; and a large and capacious thorax, with small head and small abdomen, will give a constitution characterized by abundant sanguification, powerful respiration, and vigorous propulsion of the blood to the extreme points, and, consequently, by an aptitude for muscular efforts and active exercise, much more than for mental activity or active digestion. And, again, a capacious abdomen, with small head and narrow thorax, will give a constitution characterized by great powers of nutrition, plumpness, and sloth, much more than by mental or bodily energy, or vivacity of motion. And the other combinations of them will produce constitutions participating in the qualities of their constituent elements—such as the cranio-thoracic, with large head and thorax and small abdomen; the thoracico-abdominal, with large thorax and abdomen, and small head; and the cranio-abdominal, with large head and abdomen, and small thorax, &c.; as already fully explained in our former paper.

Hitherto we have been greatly at a loss how to estimate the degree of activity of the brain, except by observing the manifestations; but we are inclined to think that Dr Tho-

mas has provided us with the means of approximating, at least, if not of positively deciding. Supposing the health to be good, if the head and brain be large, and the thorax and abdomen relatively small, we shall find not only predominance of cerebral power, but also, so far as our observation goes, cerebral activity. Or, if the head and thorax are both large, with a small abdomen, we shall find mental power and muscular energy combined; but, as part of the nervous energy will necessarily be expended in supporting the greater demand of the muscular system, the mental power will be less purely intellectual in its manifestations, and less capable of long-continued efforts of thought, and, consequently, the individual will make a less permanent impression of intellectuality; and, in our conceptions of his character, the thoracic and locomotive manifestations will also be felt as constituting no small portion of the man. A big thorax cannot brook confinement and sedentary occupations, and is, consequently, not favourable to long-continued mental efforts.

A large brain, again, with a large abdomen, and strong powers of nutrition, will constitute another modification of temperament, in which the vivacity and permanence of the mental functions will be subdued still more than by a large thorax; and although the cerebral energy will still be felt, it will appear much more in fits of exertion than as a durable state, and, in our conceptions of the man, the abdomen will constitute a large proportion of the figure, and the animal appetites will be felt to consume at least as much of the nervous energy as the purely human or intellectual powers.

The practical uses of these views are numerous and invaluable. Let us suppose that we want a man fitted to make a good general. If we choose a decidedly encephalic candidate, with small thorax and abdomen, we may find in him every intellectual and moral qualification that heart could desire; but how would he withstand the bodily fatigues of an active campaign? The feeblenes of the thoracic functions, and the consequent inaptitude for active muscular exercise, would induce a drain upon his nervous energy to carry his body through space, that would deprive him, on emergencies, of half of his mental activity and superiority; whereas, if we select a man, like the Duke of Wellington, with an ample thorax added to a large brain,

we have at the same time the power to endure fatigue without detracting too much from the nervous energy; and, consequently, we have the power of rapid mental combinations, undiminished, ready to take advantage of every opportunity. Or, if we select a man with a small head, joined to a large thorax and big abdomen, then we have the mere animal force, with only a glimmering of mind to guide and direct it.

In choosing a profession also, and we know not a more important question, Dr Thomas's theory is admirably useful. If the youth is remarkable for a fine broad chest, a moderate-sized head, and a full abdomen, no phrenologist would ever recommend to him a sedentary profession requiring much confinement, whatever might be, in other respects, his cerebral qualifications; because he would see in this configuration the indelible stamp of nature, pointing out to him a *more active* field of usefulness, and threatening him with disgust and restlessness if he ventured on a sedentary course of life, so much at variance with his natural constitution.

If, again, the youth is remarkable for predominance of the cerebral over the thoracic and abdominal functions, the phrenologist acquainted with the temperaments would never recommend a profession requiring much bodily activity and strength, in addition to much intellectual superiority; because he would at once foresee the inability of such a frame to cope with the demands to be made upon it, and the miseries to which it would lead. As an advocate, solicitor, or banker, such a person might be happy and successful; whereas as an engineer, or in any other profession requiring both mental and bodily vigour, he would be miserable.

In education, the use of Dr Thomas's theory is equally obvious. In early life the temperaments may be modified more easily than at any future period, and hence the importance of attending to them in the young. A boy of a thoracic temperament will be prone to violent exercises, and comparatively averse to mental occupation; but, by a judicious and persevering superintendence, and by gradually and proportionally extending the latter, and withdrawing the incentives to the former, a very beneficial change may, there is every reason to believe, be ultimately accomplished. And, again, the encephalic boy, with weak chest

and muscles, may in time, by withdrawing the incentives to, and opportunities of, too much mental exercise, and by a properly-regulated gymnastic training and muscular exertion in the open air, be greatly improved in bodily vigour, and yet retain his mental powers undiminished. And, lastly, the abdominal boy, whose belly is his god, may, by proper regulation of diet, and mental and bodily exercise, be brought within the pale of humanity; whereas, if left to himself, animal indulgence and mental sloth would be his portion for life.

In fact, while we write, examples of the applicability of this theory to education, to professional purposes, to morals, and to medicine, crowd in upon us; and, if we refrain for the present from proceeding further, it is with the view of securing the groundwork, by earnestly recommending our readers to go back to the analysis of Dr Thomas's book, formerly given in our pages, and not to leave it till they thoroughly understand it.

GLASGOW BRIDEWELL.*

We recently inspected this establishment, and were very much pleased with the manner in which it is kept, and with the intelligence, frankness, and practical good sense of Mr Brebner the superintendent.

From 2d August 1825 to 2d August 1826, the total number of prisoners committed was		1389
The four great classes of offences were the following, viz.—		
1. Theft, pocketpicking, and attempting to steal,	390	
2. Reset of theft, fraud, and swindling,	77	
3. Assaults, outrages, breach of the peace, rogues, vagabonds, vagrants, and disorderly characters, following no lawful employment,	275	
4. Disorderly prostitutes, guilty of breaches of the peace,	323	
	1065	
Add returning from banishment, having been formerly convicted of crime,	194	
		1259
All other offences,		130

In surveying the heads of the offenders, the difference between the development of the thieves and swindlers, Nos. 1 and 2, and that of the individuals committed for

* By George Combe.—Vol. iv. No. 16, p. 559.

outrages and breaches of the peace, Nos. 3 and 4, was obvious and striking. In the former, the organs of Acquisitiveness, Secretiveness, and Cautiousness predominated; in the latter, the base of the brain, viz. Amativeness, Combativeness, and Destructiveness evidently held the ascendency; in them there was great breadth across the head, immediately above the ear, with a large portion of brain behind that line. Of course we speak in general; for among the prisoners there were some whose development might have led them into either class, according as external temptations prompted them. In a few cases, especially among the young, the moral and intellectual organs were so deficient in proportion to the animal, that we should despair of their reformation while they were left open to the suggestions of their own minds, influenced by want and profligate society. In many of the criminals, however, the higher organs were fairly developed, although in conjunction with a large base of the brain; and on them instruction and moral restraint might be expected to produce a decided and salutary effect.

All criminals may be regarded as patients. Their offences, when traced to their causes, appear to spring either from evil dispositions, or external temptation too strong for them to resist. Every phrenologist knows that depraved tendencies are the accompaniments of animal organs predominant in size over the organs of the moral sentiments; and that, on individuals thus constituted, temptation exerts its greatest influence. Until we shall practically apply these principles, we shall not succeed in preventing, or greatly diminishing, crime. At present, however, all we can accomplish is to proclaim the truth, and record with approbation whatever appears to approach to it. The Glasgow Bridewell, we are happy to say, is excellently managed on the old system. With very few exceptions, every prisoner has a sleeping cell and a working cell for himself; and all communication with each other is completely prevented. They are employed in picking cotton, spinning, winding yarn, weaving, making shoes, &c. in solitude, during the day, and are locked up in solitude during the night. Even on Sundays they are not permitted to assemble together. On week-days a regular teacher visits each cell and communicates instruction, and on Sundays some pious individuals teach religion. These meritorious persons have

formed themselves into a society, and all their members are freely admitted to the prisoners: ladies visit the females and gentlemen the males.

The effect of this treatment will obviously be to abate the vivacity of the animal propensities, and to rouse the moral and intellectual powers. Solitude and labour will tend powerfully to accomplish the first end; but the means employed for attaining the second are too limited. The average number of prisoners in confinement is 250, and it is impossible that the teacher and visitors can remain with each a length of time sufficient to make a deep or lasting impression. The periods of confinement also are too short to favour reformation by moral means. While we approve of the practice of preventing the criminals from associating together, we think they would be greatly benefited by more extensive social intercourse with moral characters. Human nature demands enjoyment as its first and greatest want. If the only experience of a state of morality afforded to criminals is characterized by severe privation of animal pleasure, and the almost total negation of moral and intellectual excitement, they must necessarily form a very unfavourable opinion of the attractions of a virtuous life. We should like to see them, if possible, made acquainted, from experience, with the pure and vivacious joys that flow from activity of the higher faculties of man.

Mr Brebner favoured us with the following tables of commitments:—

Crimes and Offences.

	Year ending 31st December 1825.			Year ending 31st December 1826.		
	Males.	Fems.	Total.	Males.	Fems.	Total.
Number of commitments during the year,	558	703	1261	688	713	1401
Deduct recommitments of the same individual in the currency of the year,	101	279	380	124	281	405
Remains nett number of different persons,	457	424	881	564	432	996
Whereof in custody for the first time,	360	209	569	444	189	633
Old offenders,	97	215	312	120	243	363

He has observed that offenders committed for the first time, for only a short period, almost invariably return to Bridewell for new offences; but if committed for a long period, they return less frequently. This fact is established by the following table, framed on an average of ten years, ending 25th December 1825.

Of prisoners sentenced for the first time to

14 days'	confinement,	there returned for new crimes,	
about	. . . . .	. . . . .	75 per cent
30 do.	do.	. . . . .	60 —
40 do.	do.	. . . . .	50 —
60 do.	do.	. . . . .	40 —
3 months	do.	. . . . .	25 —
6 do.	do.	. . . . .	10 —
9 do.	do.	. . . . .	7½ —
12 do.	do.	. . . . .	4 —
18 do.	do.	. . . . .	1 —
24 do.	do.	. . . . .	none —

During the ten years ninety-three persons were committed for the first time for two years, of whom not one returned.

Mr Brebner conceives that punishment must never be lost sight of. The effect of the two years' confinement he attributes partly to the fear of punishment, and partly to the habits of order and industry acquired during it. When prisoners come back two or three times, they go on returning at intervals for many years. He has observed that a good many prisoners committed for short periods for first offences, are afterwards tried before the High Court of Justiciary, and transported or hanged.

These results confirm the doctrine, that individuals cannot change their character and conduct by a mere act of volition, but that their minds must be operated upon by long-continued influences, and gradually ameliorated; just as disease cannot be removed from the body by a spell, but by a sanative process, requiring both attention and time for its completion. The present practice is founded upon ideas of punitive justice, which appear, at first sight, natural and beneficial, but which do not stand the test of reason and rigid analysis. A boy picks a gentleman's pocket of a handkerchief, and is sentenced to 14 days' confinement in Bridewell; which seems a moderate and just punishment for a trivial offence; and if any one were to propose to im-

prison him for two years, the extravagance of the infliction, in proportion to the crime, would startle the public mind, and he would become the object of universal sympathy. Yet, if the real welfare of the boy be kept in view, and if we believe the foregoing facts, we shall find it difficult to resist the conclusion, that the sentence of 14 days is, in its ultimate results, attended with far greater severity, and more positive injustice, than would accompany confinement for two years. The offender, in the former case, becomes familiarized with crime, almost invariably returns to Bridewell, and proceeds from step to step till he is transported or hanged; in the latter case, his whole habits are changed, and so deep an impression is made on his mind, that he rarely re-appears in the criminal kalender. We say rarely; because the circumstance of his not afterwards becoming an inmate in Glasgow Bridewell, is no proof of his entire reformation: he may have removed to another territory, where he thinks the law will be administered with less severity. But if the great majority of those confined for long periods did not abandon their criminal pursuits, some would undoubtedly find their way back to their old quarters; and as *none* appear to return, we may safely infer that many are permanently reformed.

It seems to us, then, that a sentence of fourteen days for a first offence is, in its ultimate consequences, more prejudicial to the welfare of the criminal than one for a long period; and yet there appears an evident absurdity in proposing to punish a grave delinquency with imprisonment for fourteen days, and a trivial one with confinement for two years. But this just proves that there is an error in the *principle* on which criminal justice is administered. The absurdity arises from this circumstance, that the criminal law regards every offender as a voluntary devotee to crime, and occupies itself exclusively in administering a certain quantity of suffering for a certain degree of guilt, without the least reference either to the causes of the transgression, or to the consequences of its own treatment. If this principle were sound in nature, it would be successful in practice. The infliction of fourteen days' confinement would not, in its general effects, turn out more severe than imprisonment for two years. In short, the facts contained in the table of "prisoners returning" could not happen.

On the phrenological principle much greater consistency is obtained. According to it, no man can become criminal unless from predominance of the animal organs over the moral and intellectual, or from strong external temptation. Neither of these is a voluntary condition on the part of the offender: he is therefore to be viewed as unfortunate; and, that he may be cured, the *cause* of his depravity must be removed. On this principle, pocket-picking is one symptom of moral disease, lifting tills another, house-robbery a third, swindling a fourth, and so on. The extent and depth of the disease are to be gathered from the whole symptoms and condition of the patient, and the sanative process ought to be conducted with reference to these. A boy whose father is unemployed, and who has tasted no food for twenty-four hours, may steal a loaf from a baker's basket standing temptingly on the street; another boy, well fed, clothed, and educated, may pick a pocket, and drink the produce of his depredation. Both of these acts are thefts; but the one may happen with a boy of very considerable natural morality, who would be completely protected from offending again by removal of the temptation—in other words, by being supplied with food. The other indicates a decided deficiency of natural morality, with great strength of depraved appetite; and to protect the offender from repetition of his crime, his mind would require to be subjected to a long course of discipline, one part of which would necessarily consist of measures for abating his evil tendencies, and another of means for elevating his moral and intellectual principles. According to this view, the treatment of each criminal would bear reference to his depravity, and not depend exclusively on the external form in which his evil qualities manifested themselves. One man may fall senseless to the ground through inanition, and another from apoplexy. What should we think of a physician who should treat both in the same way? The case of the mind is parallel; and it is only gross ignorance of mental philosophy that can perpetuate the present system of criminal legislation.

We have been assured by an enlightened friend connected with the administration of the criminal law in Scotland, that the imperfection of the practices now in use is seen, felt, and greatly deplored, by almost every judge in the country, from police-magistrates up to the president of the

High Court of Justiciary; and that, if the public mind were enlightened, and brought to desire a thorough reformation with the introduction of a rational treatment, the judges would hail it with pleasure. Mr Brebner admitted, that a boy confined for a long period for his first offence was really more fortunate than one confined only for a few days; but he objected to the apparent injustice of long imprisonment for slight offences. The injustice, however, is obviously only apparent; the real severity is in the short confinement. No doubt, as long as offenders are committed with the view of punishment exclusively, Mr Brebner's objection is unanswerable; and the principle of cure or reformation must be adopted, before consistency between intention and result can be obtained. In the Glasgow Bridewell, every thing that can be done, in the way of restraining evil tendencies, appears to be accomplished. The solitary confinement, regular employment, and mild treatment of the prisoners, are well calculated to allay the excessive activity of the animal propensities; but we repeat, that much is wanting to elevate their moral and intellectual faculties. The effects, however, produced by long confinement, even with this deficiency, show forcibly how much good might be accomplished by a well-conducted penitentiary.

EDUCATION—MR WOOD'S SCHOOL.*

THIS is a sensible, interesting, and instructive book. Bating some errors in principle, to be noticed in the sequel, the work is by far the best exposition of school-instruction we have read; while the system expounded is in itself the nearest to perfection, under the same qualification, which has yet been practically exhibited.

The author, with becoming candour, disclaims the character of an originator. He has taken the best of both Lancaster and Bell;—indeed he found *that* basis established when he first volunteered to superintend the Edinburgh

* Account of the Edinburgh Sessional School and the other Parochial Institutions for Education, established in that city in the year 1812; with Strictures on Education in general. By JOHN WOOD, Esq. Edinburgh: John Wardlaw, 1828.—Reviewed in Phren. Jour. vol. v. No. 20. p. 604, by JAMES SIMPSON.

Sessional School. But he has improved upon both systems, and produced results in the working beyond any thing which they ever arrived at. The Sessional *daily* School was an accession to the Parochial Sunday Schools, and is attended by from 500 to 600 pupils, from six to fifteen years of age. Mr Wood is a member of the Scottish bar, and sheriff of a county; and has no other connexion with this school than that produced by enthusiastic amateurship; which seems to have impelled him at first to attendance, by degrees to assistance, and, ultimately, by consent of masters and directors, to such unqualified supremacy, as to identify his name with the school, and render it one of the most noted *lions* of Edinburgh.

Reading, writing, and arithmetic, are the elementary branches of education taught in the Sessional School. Geography is voluntary. The system is monitorial, the whole directed by one master, and superintended by Mr Wood. The arrangements are excellent; and the whole presents a model of order, punctuality, economy of time, and division of labour, which renders the management of 600 children as easy as that of a battalion of well-drilled soldiers of the same number. But the boast of this school is the perfection to which the new system is carried, of rendering reading the mere vehicle of useful knowledge. This is called the EXPLANATORY method of school-instruction. Reading is gained by the bye. That operation exercises chiefly one faculty, namely, Language, or verbal memory; under an overload of which we have all groaned, in our day, during the dull and tiresome hours of the *old* school. But the Phrenologist can analyze the explanatory system into its elements, and show that its attractions arise from the delighted activity, not only of the knowing, but also of the reflecting faculties and moral feelings. An able explanator conveys ideas of individual existences and events; also of form and size, weights, colours, sounds, places, arrangements, and numbers, with all the relations which subsist among these qualities. He goes farther, and points out the more extended relations of comparison, and even those of necessary consequence. The moral sentiments, also, of the pupils, may be kept in the most beneficial exercise. Phrenology tells us, that the activity of every faculty is attended with pleasure; how great, then, may not

be rendered that pleasure which is the fruit of the simultaneous activity of the whole! Any one who sees Mr Wood, and his eager and delighted pupils, engaged in a spirited explanatory exercise, will cease to wonder at the progress made under his tuition. *Task* is unknown, except as a word in the course of explanatory definition; and we hope yet to hear it at Mr Wood's and all other schools defined as "the forced exercise of one or of a few faculties, while the rest are kept under an unnatural restraint." Difficulties disappear—all is the zealous bustle of pleasurable exercise.

Mr Wood's own account of the explanatory system is this:—"Before entering upon the consideration of the reading department," says he, "it may be proper to premise some general observations on that method of EXPLANATION which has been so highly approved of in the Sessional School. Its object is threefold:—*first*, To render more easy and pleasing the acquisition of the mechanical art of reading; *secondly*, To turn to advantage the particular instruction contained in every individual passage which is read; and, above all, *thirdly*, To give the pupil, by means of a minute analysis of each passage, a general command of his own language. It is of great importance to the proper understanding of the method, that all these objects should be kept distinctly in view. With regard to the first, no one who has not witnessed the scheme in operation, can well imagine the animation and energy which it inspires. It is the constant remark of almost every stranger who visits the Sessional School, that its pupils have not at all the ordinary appearance of schoolboys doomed to an unwilling task, but rather the happy faces of children at their sports. *This distinction is chiefly to be attributed to that part of the system of which we are here treating; by which, in place of harassing the pupil with a mere mechanical routine of sounds and technicalities, his attention is excited, his curiosity is gratified, and his fancy is amused.*"*

Our author, although a great improver of it, does not pretend to be the first introducer of the explanatory system; and he rejoices, as we do, to see it not only prac-

* We have marked the conclusion in Italics for subsequent reference.

tised in such schools as the Circus Place and the Davy Street, but coming into very general adoption in private seminaries,—of course with very different degrees of success, according to the judgment, skill, and knowledge of the teachers. With great propriety he applauds the introduction of explanatory English reading into the High School and Academy of Edinburgh as accessory (according to yet prevailing opinion) to the *more* important study of the dead languages. *We* hail it as the dawning of a wiser day, when that remnant of monachism, the engrossing culture of the *dead* languages, will be very secondary to a comprehensive and well-arranged system of explanatory English reading.

The author proceeds to detail the application of the explanatory method to the various grades of pupils, beginning with the youngest. "In *explaining*," says he, "at this stage, it is a special instruction to the monitors, never to exact any regular definition, but to be satisfied with any explanation given by the child himself, which indicates his knowledge of the meaning, though it be conveyed in his own ordinary or homely language, or by mere signs. The great object, at this stage, is to enliven what would otherwise have been intolerably dull,—to teach the child that every word he reads has a meaning, and to form him to early habits of attention." Nothing can be better than this, so far as it goes. Useful knowledge is at least verbally extended as the pupil advances, and information in nature and art, in so far as it can be comprehended, is communicated. We cannot follow Mr Wood through several chapters of these interesting details, but can safely say, that the reader (especially the phrenological reader) will be highly pleased with them. The system involves a very satisfactory exercise of several, though not all the intellectual faculties.

This system, like every thing new that tends to benefit the species, has met with the opposition and been subjected to the ridicule of uninquiring, prejudging self-complacency, or disguised self-interest. "When, therefore," says the author, "we consider the strong tendency which has existed for years past to turn our proceedings into ridicule, and to expose to the public every slip (often so called, *we* would add, from the sheer ignorance or unfairness of the exposer), which every individual pupil has hap-

pened to make, the directors may surely, without any extravagant boast, be entitled to congratulate themselves on a result which they would certainly not have dared to anticipate."

We have already said, that the explanatory system of the Sessional School appears to us to stand a phrenological test, so far as it goes. This the reader must have interpreted into an opinion that there is some shortcoming. There is a shortcoming, and it is very material. It is fortunately, however, of easy remedy, and one or two schools in Edinburgh have already taken the lead of Mr Wood in applying it. His system makes no provision for supplying the most important of the observant faculties with its proper food, without which all knowledge of the material world must be shadowy and imperfect. This faculty of *Individuality*, so essential to education that Dr Gall named it the faculty of Educability, is the power whereby we cognize and remember individual material existences, and without which we could have no knowledge of the external world. Its *organ*, situated immediately over the nose, is prominent in children; and the *faculty* is manifested by them in the ceaseless avidity with which they examine every thing which comes in their way. Now every object, simple and complex, in nature, furnishes an *idea* to this faculty, and there can be no such idea without the object being presented through the senses to the organ. The faculties of Form, Size, Weight, and Colour, will do their part in affording perception of the qualities of the object; but the comprehension of them all in the *individual* object is the important function of the faculty alluded to. The author's system, unfortunately, starves this faculty; no material objects, not even their simulacra in drawings or models, are presented to Mr Wood's pupils. Material objects are only *described* and *talked about*, but are not seen, heard, weighed, touched, or smelled. This is one of the results of neglecting Phrenology; the existence of particular faculties is not dreamt of, and of course no means are used for their exercise. This defect is particularly conspicuous when the author appeals to nature as the foundation of *his* method. "The more the system has been matured, and the better it has been understood, approbation of it has been the more increased. Its boast is not that it is founded

upon any newly discovered principle, but that it arises from the first and most obvious dictates of nature. What judicious mother, in teaching her child to read, would not be at pains to shew him as early as possible the benefit of reading? Would she not, in picking out for him the smallest words, when she came to the word *ox*, for example, tell him, not by any regular definition, but in the simplest language, that it meant the animal which he had so often seen grazing in the meadows? Would she not naturally do the same with regard to every tree or plant that happened to be mentioned? and as his capacities unfolded, would she not gradually proceed to communicate to him such higher information as his lessons might suggest? The mere artificial methods, which the *art* of teaching has subsequently introduced, however useful some of them undoubtedly are, have had the unhappy effect of banishing, in a great degree, this natural teaching, and of substituting, far too exclusively, in its room a mere attention to the sounds of language."

Now, we maintain, that when a material object, such as an ox, a plant, a metal, or a liquid, is in question, unless, as in the case of the ox in the meadows, it is already familiar to the child, explanations *about it*, be they ever so correct and clear, can have in his mind no *idea* for a basis, and must therefore be nothing better than "the sounds of language." Hence the judicious mother, really teaching according to Nature's dictates, would take care that every object about which she talks to her child shall first have been examined thoroughly by him, and fixed firmly in his Individuality. The Infant Schools have decidedly taken the lead in making judicious provision for this substantial exercise of the faculties. They have a complete museum of material objects, consisting of specimens of substances, vegetable and mineral, drawings of animals, mathematical figures, simple specimens of art and manufacture, and of every thing that can lay a solid foundation of elementary knowledge of the material world, for guidance in after life.

The Circus Place and St George's Sessional Schools have adopted the same method, though less completely and systematically. As the pupils advance, mechanical powers and instruments may be exhibited; also chemical combinations, anatomical drawings and preparations, and all objects

calculated to increase useful knowledge, and communicate for life that invaluable accomplishment called *resource*. The rule ought to be inexorable, *never to talk of any objects that have not been previously seen and examined by the pupil either in reality or in representation;* the most confused and erroneous notions are sure to be the consequence of the contrary practice.

Mr Wood's method of impressing history, both sacred and profane, is unexceptionable. That species of knowledge, addressing itself to Eventuality, the faculty for action, does not require sensible signs farther than the aid of maps; in the infant schools it is assisted by little historical pictures. This enlists some additional faculties, and thereby increases the pleasure to the children.

We have not time to detail, what will well reward the perusal, the author's interesting account of his experimental, and completely successful, introduction of incidental grammar. We know that other teachers, particularly Mr Hamilton, have taught the grammar of a language in the same natural and effectual method, without that penance called an abstract grammar-book; but we give the most implicit belief to Mr Wood's statement, that the thought was to himself original. There is no part of his system more creditable to his talents. The arithmetic, too, is quite unsurpassed, we may safely say, in the empire, for dexterity and despatch. In this department, Mr Wood refuses all the honours of witchcraft which have been tendered to him, and pretends only to have encouraged rapid notation, leaving each pupil to find out the easiest method of working the rule for himself. In notative arithmetic other faculties besides Number may lead to dexterity; for, with our pencil in our hand, we cannot be doing more at one moment than dealing with single figures, in adding, subtracting, multiplying, or dividing. In this there is no *Bidderism*, or mental operation. This last exercise, however, is likewise in use in Mr Wood's school,—the method also left to the mental calculators; and some of them perform very creditable feats. Here the author, phrenologically enough, observes, that there is considerable difference of endowment among the pupils. We have not made the observation ourselves, but should much like to know Mr Wood's experience, whether some of the indifferent mental calcu-

lators may not be good notators, and *vice versa?* This would aid our conjecture, that dexterous and prompt arithmetical *notation* is not the result of a large endowment of the faculty of Number alone, but depends on other faculties or combinations.

Our author states, that the *secret*, as it has been called, of his arithmetical and literary display, is emulation; that the zeal and business-like promptitude, in every department, is produced by the intense desire of the pupils for the distinctions of places and prizes: and he agrees with the Edinburgh reviewer (who advocates the old notions of human nature, which will continue to mislead mankind and vitiate human institutions till the phrenological discoveries become the standard philosophy of mind and man), "that a cook might as well resolve to make bread without fermentation, as a pedagogue to carry on a school without emulation: it must be a sad doughy lump without this vivifying principle."

Here we part company with both Mr Wood and the Edinburgh reviewer; taking, by the light of Phrenology, the very opposite direction;—confessing, however, that but for Phrenology we should probably have travelled on with them very contentedly in the old road, and with them scouted the idea of any other. We now, however, see too clearly the specific action of well-distinguished human impulses, and the effect of these on human weal or wo, to be misled any longer.

Some teachers are beginning to doubt the benefits of badges and places and prizes at school. Some would even dispense with them, were they not controlled; but Mr Wood is a zealous advocate for what, by aid of a solecism, is called *generous* emulation, and, treating the opposite opinion with scorn, runs off, as if fresh from the Olympic games, into all the accredited declamation on that yet unexamined subject. For example—"What might be the state of this question, if man, in his present imperfect condition, and particularly in its earliest stages, stood in need of no additional incentives to the pursuit of knowledge or the practice of virtue than the pure love of either, it is very unnecessary to inquire. Surely no one will contend that this is now his actual condition; and, in such circumstances, can it be wise in him to deny, either to himself or to those

intrusted to his charge, the aid of any of those additional stimuli which Providence, in mercy, proffers to supply this natural imperfection? or which of those incentives is more noble or animating than the ardent desire implanted in our bosom of rising superior to our fellows? How many slumbering faculties has not this living principle roused into action! To how many days of toil and waking nights—to how many splendid discoveries and inventions—to how many deeds of virtue and exploits of heroism—to how much individual happiness and social improvement has it not given birth! In place of being a base and sordid passion, it is one which burns brightest in the noblest and most generous souls. Men may theoretically speak and write against it, but he, and he only, who is incapable of excellence, will ever refuse its aid." *We* would just reverse Mr Wood's peroration, and aver, that he who is incapable of *true* excellence will take the aid of one of the most truly selfish and mischievous of all desires,—the mere desire of "rising superior to his fellows."

This high advocacy of systematized emulation comes of the selfish morality of the dead languages, with which we get imbued at school, and of which there have hitherto been no ethics but those of practically-disregarded Christianity to disabuse us. The set phrases, as above, have become household words, and we reck not that we are calling "good evil and evil good," with all the weight of the denunciation of so doing on our heads.

We glanced at this subject incidentally before.* Mr Wood has answered some objections stated by himself, but he has not grappled with, for he is not aware of, the *principle* upon which our objections are founded. The subject is of such vital importance in moral education, that we shall a little more fully state our views. We do not expect to convert Mr W., but we shall have done an important duty if we shall shew that the question has two sides.

1. We shall assume, without admitting, that the desire of mere "personal superiority over their fellows" does, in the pupils of a school, contribute to *intellectual* progress, nay, very materially increase it; and our thesis is, that this increase, being at the expense of their moral sentiments, is a loss and not a gain in their education. Among the feelings,

* Vol. iii., page 182.

as distinguished from the intellectual powers, Benevolence, Conscientiousness, and Veneration, are supreme; these feelings alone go out of self, and desire higher objects,—the rights and the happiness of our fellow-men, and the love of our God: they are, in short, the feelings addressed in the Divine precepts, "to love God with our whole heart and mind, and our neighbours as ourselves;" and again, "to do justly, to love mercy, and to walk *humbly* with our God." Creation is palpably constituted in reference to supreme control by these feelings; and in proportion as they do or do not mingle in and constitute the guidance of human conduct, will be the happiness or the suffering that will result from it. Dr Spurzheim, in his profound work on education, says, that "human nature is so constituted by the Creator, that morality is as necessary to the prosperity of mankind as oxygen to combustion, or caloric to vegetation, or respiration to life." Till we arrive at these exalted qualities, we shall find that we are still in the inferior regions of *self*. The propensities are selfish from their very nature, and not less so are the inferior sentiments of the Love of Approbation and Self-esteem, which in their abuse degenerate into vanity and pride, love of glory, insolence, and tyranny. With none of the selfish feelings in others can man, by his constitution, sympathize; and if we observe for what qualities man is respected and loved by his fellow-men, it is not for those qualities which enrich or aggrandize himself, but for those which have the rights and happiness of others for their objects: in other words, a man's moral rank in society is commensurate with the extent of his Justice, Benevolence, and Veneration; and in exact proportion as these high motives are alloyed by self-interest,—whether the desire of wealth, or power, or praise,—is the conduct debased and the character deteriorated. Again, the selfish impulses are greatly more powerful than the social, and differ from them in this particular, that the proper education of the selfish feelings is, in most individuals, a repressive regulation, while that of the social is expansive culture. Vanity and pride, for example, being abuses of Love of Approbation and Self-esteem, need no encouragement, but much discouragement; while Benevolence and Justice require to be drawn forth into activity by practical exercise. Now, it has hitherto been the grand error of

our schools, that they have made no provision for the practical training of the social, and regulation or repression of the selfish impulses; nay, they have not contented themselves with merely leaving the selfish, as they have left the social, to themselves, but have actually made the positive culture of the selfish feelings an essential part of their systems. Can we wonder, then, at the unmitigated self-seeking of our social institutions and individual habits? Can we wonder that life is a scene where the selfish predominate over the social feelings to the overwhelming degree which we all so much deplore? Every youth is carefully educated for the race of self-aggrandizement, to value and cherish the "ardent desire to rise superior to his fellows" in wealth, and power, and splendour, and fame, and to consider all pursuits which cultivate the higher feelings as so much sickly sentimentalism and reprehensible loss of time, quite unsuited to man "in his present imperfect state." Now we hold, that man's present imperfect condition, the low state of his *moral*—is greatly aggravated by the neglect of his social, and the great zeal of his selfish education. Many of the moral evils of society have their root in this grievous miscalculation; for crime itself is only intense selfishness. Every institution is therefore morally wrong which leaves unrepressed the selfish feelings, and much worse which positively encourages them. But the emulation of our schools is liable to the latter heavy charge. A petty ambition is the lesson taught at their threshold, and which continues to be the leading incentive to their close; and so aptly is the lesson learned, that the places and the medals are held out to be, and are felt to be, the ultimate advantages of proficiency, to which the proficiency itself is but as a means to an end. This is indeed inversion.

We anticipate the answer, that we take the matter up too seriously; that the merely changing places at school, and competing for a medal or a book, are objects too insignificant to foster selfish feelings. No one who has engaged in or witnessed a competition at school will make this answer, or deny that such competitions have an importance in them to the parties not exceeded by that of any object of ambition in after-life; and that they have only the more moral power because the competitors are young, and the more liable to receive strong and permanent impressions.

There is something in the never-ceasing agitation of place-taking, in particular, extremely noxious. It is a perpetual restless scene of alternate glorying and repining, which has a double effect in fostering the pride of the one and the resentment of the other of the actors in it. We have watched its operation closely and with infinite disgust in a new seminary, where, authority being at first a little lax, feelings manifested themselves freely, which a better discipline has outwardly restrained, but by no means eradicated. To say nothing of that miserable perversion of the very purpose of school which fills the mind of the pupil, that his place in his class, to *get up* himself and *get down* his neighbour, is the grand object of his exertions, as we have the clearest proofs is the prevalent idea, we have witnessed very passionate excitement from place-taking, quarrels, falsehoods, frauds, and even blows; all coming from the desire of rising superior to each other.* The possibility of these at all is an immense evil,—the possibility of them in even a few cases is an evil; for, as Dr Spurzheim reasons, these are just the cases where the selfish system does most permanent evil, both to the children themselves and to society. The children of to-day are the men and women of to-morrow: and it is against all experience to expect the selfish child to turn out, by mere lapse of years, a just, much less a generous man. Nothing can involve a greater fallacy than the author's notion, that friendships are formed at school, *because of a generous* rivalry. They are formed from other obvious causes of attraction in *spite* of that cause of repulsion. Generous rivalry is generosity when strong enough, which it rarely is, rising above rivalry. Rivalry itself is unmingled self-preference; and to apply the epithet "generous" to it is a solecism. The rivalry is selfish inherently and essentially, and is doing all its mischief in deteriorating the character of the parties, although enough of *Adhesiveness* remains to attach them to each other. This is not the only error with regard to the effect of school on after-life, an error which proceeds from indiscriminating views. Who has not witnessed the exulta-

* In the seminary alluded to, a stricter discipline has now banished these outbreakings; but every day furnishes too unequivocal evidence of those little spites and heartburnings which are inseparable from this ceaseless personal struggle for a paltry distinction, and which have moral consequences that render the intellectual advantages a dear purchase indeed.

tion of a teacher of Latin and Greek when *his* boy makes a figure in the professional, the literary, or the political world? These are specimens of pure want of Causality; they mistake one element of human nature for another; and this will continue to be done till thinking and writing are regulated by the clear views of Phrenology.

Of course, on the same general principles, we object to prizes, as addressed to the selfish feelings, and as adding another of these, namely, Acquisitiveness, to the combination which is excited by mere places and honorary badges. Thus is made up any shortcoming of evil which results from these distinctions being less personal and irritating than the never-ceasing alternations of place-taking.

Another demoralizing quality in the rewards of school is their palpable injustice. There is great injustice in making the evidence of merit to consist, not exclusively in the manifestation of superior qualities, but in wearing a badge or occupying a seat which can be possessed by one alone; and which, moreover, may often indicate, not so much the intrinsic excellencies of the individual, glorying in mere personal superiority, as the comparative deficiencies of his class-fellows. It is as illogical as unchristian to reward natural gifts, and degrade more slender endowments. We dislike as much as Mr Wood can do the affectations of Mr Malan; but he is unanswerable on the principle.

We now recall the assumption, that this morally-hurtful system of emulation necessarily produces, indirectly, intellectual results which cannot be attained without it; and we call Mr Wood himself as our first witness to the contrary. We marked his evidence in Italics on page 217 of this article, when we took him off his guard, and not theorizing on emulation. He avers, that *excited attention*, *gratified curiosity*, and *amused fancy*, are the inspiring elements of his system. This is strictly phrenological, and strictly true. All the phrenological books teach that each faculty's exercise is a specific pleasure. The pleasure is a direct and independent result from the presentation of the object fitted by nature to excite it, and does not depend upon the activity of any *other* faculty. It were as reasonable, for example, to predicate that we cannot see without touching, or taste without hearing, as to say that we cannot enjoy the pleasures of intellect but through the channels of the Love

of Approbation and Self-esteem. There is a radical defect in that intellectual education which is not made a source of intense and ever-waking pleasure. We do not require a bribe to eat wholesome food when hungry. Schools are judged of from the insufferable dulness and tedium of teaching mere words, and starving every other intellectual appetite. This is that really doughy lump to which places, prizes, and rods, are the necessary leaven. We grant this necessity just as we grant the indispensability of severe discipline in the navy, to force men to the disrelished duties of an unnatural life. But what, we would ask, makes Mr Wood's school to differ in all that constitutes juvenile happiness from those heart-withering houses of correction, the schools of the old system? *They* carry emulation to its utmost pitch, and yet how different from Mr Wood's willing and delighted labourers are these afflicted prisoners! There must be other elements in Mr Wood's system, and he himself has told what they are, to which mere desire of rising superior is a superfluity, not a harmless, but a most noxious superfluity. Mr Wood is just the person to make the experiment of abolishing place-taking and prizes, to repose a just and well-deserved confidence in his own system, and fearlessly to let it bear its own weight. He has made as bold experiments as this, and been surprised with his own success; and when he has thrown away these miserable crutches which deform him, our word for it, he will find that he stands erect and firm without them, and while he takes nothing from the intellectual advantages, will greatly elevate the moral character, of his system.

If Mr Wood should still ask, For what was the love of distinction so strongly implanted in the human breast, if it is to be "eradicated" in this manner?—we should answer, that no Phrenologist talks of eradicating any of the primitive impulses of the human mind; but useful knowledge and amiable dispositions, we remarked in a former Number, constitute real excellence; and we should teach children to appreciate the intrinsic advantage of these attainments, and practically to rely on the manifestation of them as the grand sources of happiness, honour, and prosperity, through life. To excel in these is the legitimate object of Self-esteem and Love of Approbation. But it is obvious, that every individual may abound in these gifts without limiting the

quantity attainable by his fellows; and hence the most ardent desire in one child to surpass all others in virtue and wisdom, and thereby to gratify his desires of renown and supremacy, does not necessarily imply a single pang of suffering or the slightest degradation in those who run with him in the same race. There are here not one prize, but prizes for all according to their degrees of merit. Such are the ethics of Phrenology, and such, moreover, are the ethics of Christianity. The meagre gleanings, adduced by the author, of a few incidental expressions in Scripture seeming to favour his argument, are scattered to the winds before the overwhelming force of principle and of precept wherewith the Sacred Volume teems, which stand opposed to the abuse of the faculties desiring praise and power, which condemn self-exaltation, and inculcate humility. Even when the Christian's progress is figuratively called a race, its prize is essentially that very moral excellence which excludes selfishness, and, without jostling, or hindering, or pulling back, or *getting down* our fellow-competitors on the way, may be won by ALL who run for it.*

In one part of his work, and one only, the author puts a question to the votaries of our science. We were amused with the question, and gratified by his own judicious though not *complete* answer to it. When drawing a just and obvious distinction between the being learned and the being "apt to teach," between knowing much and successfully communicating knowledge to the young, Mr Wood says, "We know not whether to this faculty phrenologists have assigned any peculiar region of the brain, but we are persuaded that it is a talent of a peculiar kind, which even long practice does not always confer." Dr Spurzheim almost uses these latter words. We answer, that every human faculty, every mental quality, is and can only be manifested

* Nothing is more promising in the system of early moral training in the infant schools than an approximation to these views of social in opposition to selfish feelings. There is no place-taking in these happy and zealous seminaries; and when the firstlings of the flock about to be assembled in Edinburgh shall come to Mr Wood's more advanced school, he will be agreeably surprised to find how easily those stimuli, which he at present thinks proffered in mercy, may be dispensed with. We look forward to the pleasure of applying, in a future Number, the phrenological test to Mr Wilderspin's infant school system, and we know that it will stand it well. When asked if he encouraged place-taking, Mr Wilderspin answered, "My infants would scorn the *baby* practice."

through the medium of some region of the brain; and that phrenology can point to the region of the brain, or rather regions (for, like most accomplishments, it is the result of a combination of faculties), of this most important of any, aptness to teach; which Mr Wood is perfectly right in concluding to be an *innate* talent, as phrenology has farther demonstrated all talents to be. Of the combination of faculties in question, the author has, with much sagacity, hit upon some of the elements himself,—we would have almost said, but for the equivoque, without the aid of the brain: 1st, The master, says Mr Wood, must rule by love, and secure the affections of his pupils. This, we say, he can only do by Benevolence and the most untiring Love of Children. 2d, He must condescend to place himself in the pupil's situation, and feel his difficulties. Phrenologicè, his Self-Esteem must be under due regulation, and must not have been pampered and inflated by scholastic ascendencies and distinctions. 3d, He must have *tact* to choose times, seasons, and circumstances, the best to impress his pupils in their various conditions. This *savoir faire* phrenology has found connected with Intellect, Imitation, and Secretiveness. Secretiveness gives the power of concealing all that would mar the intended effect, and thereby bestows increased expression and interest on what is communicated. This, unknown to himself, is Mr Wood's chief *secret;* and if the organ is small in him, that part of phrenology would be in danger. Of this, however, there is no risk; phrenological pathognomists, who have seen him *in actu et æstu docendi*, concur in declaring, that it is impossible to imagine the natural language of the faculty in activity more unequivocally manifested. Although Mr W. stops here, phrenology conducts us farther, and shews us that the combination for aptness to teach is yet richer: 4th, Language, as a faculty, is necessary to adapt expressions nicely to meaning and to the capacity of the learner; 5th, A well-regulated Wonder, to give increased interest to the communication of a knowledge of the works of the Creator; 6th, Hope for cheerfulness; 7th, Ideality for refinement; 8th, Veneration for religious impressiveness; and, 9th, Conscientiousness for the most unswerving justice, candour, and impartiality. Now, phrenologists do assign, or, more correctly, find assigned by the Creator of

man, well-marked regions of the brain for each of these elements of that invaluable talent called aptness to teach; and more, they can point out, before he is even tried, the teacher who is gifted with it. Such men cannot be too highly prized and respected. Nothing argues worse for the staple of school-education than the fact, that its professors hold a humble grade in public estimation. It is a tacit vilification of the common curriculum, that its conductors are ridiculed as pedagogues and *dominies;* that theirs is a situation to rise *from* instead of, as that of the instructor of youth ought to be, to rise *to*. Many have been the sneers at Mr Wood's self-degradation, as it has been called, to the despised rank of a schoolmaster. He has nobly scorned that ignorant prejudice of an imperfectly-educated but self-satisfied public, and is already towering above his detractors, the stronger in his moral attitude that he has so triumphantly fought his way to that respect which, sooner or later, truth and sense and public spirit must assuredly command. But it is just in such men that we most deplore a share of that common prejudice and misdirected feeling, the reproach of the present age, which reject without adequate examination the truth of phrenology; that instrument of practical power in all human concerns, that science which has thrown a flood of light on the previously dark subject of the human mind, and is destined yet to elevate every system and purify every institution which has to deal with human nature.

Since this article was in types, we have been assured by an experienced teacher, that he daily deplores the effect of place-taking on many tempers under his charge; but, *under the present system*, knows not what to substitute for it. He added, that we had not stated the evils too strongly.

Another, only the other day, declared to his pupils, that he was so much disgusted with their envyings and tears, that he must abolish places and medals altogether!

In some schools moral merit, or good conduct, alone is rewarded. This results from ignorance of sound ethics. Morality is the highest pleasure of which man is capable, and therefore, both naturally and scripturally, its own reward. It is a solecism to stimulate to this by addressing selfishness.

ESTIMATE OF THE AUTHORITY OF CLEVER PRACTICAL MEN IN THE PROFOUNDER AND MORE ABSTRACT DEPARTMENTS OF SCIENCE.*

THERE are two orders of intellectual faculties—the *knowing* and *reflecting*. The knowing faculties, whose organs are situated in the lower and middle region of the forehead, take cognizance of things that exist and of occurrences, with their qualities and more obvious relations. A mind in which these faculties predominate is well adapted for becoming learned by reading and observation, and also for attaining expertness in practical business. Accordingly, lawyers and physicians of extensive practice and no mean reputation, and also skilful merchants, frequently possess these organs in a predominating degree; and, what is more to our present purpose, editors of newspapers, magazines, and other periodical literary publications, are generally found to excel in the practical department of their duty in proportion to the degree in which the knowing organs are developed, in combination with a favourable endowment of the propensities and sentiments. The knowing faculties give them that capacity for varied information, that ready tact in arranging and disposing of details, and that Argus-like power of observation, which enables them to seize the passing occurrences of life, and present them in all the freshness of actual existence to their readers.

The second order of intellectual faculties is the reflecting,—comprehending Comparison and Causality, which take cognizance of the more recondite and abstract relations of objects and events. The relations perceived by them are completely beyond the sphere of the senses and the knowing faculties; and one of the great distinctions between man and the lower animals is the want, or great deficiency, in the latter, of the organs of these powers. Their abstract functions may be illustrated by a simple observation. On one of the hottest days of last summer, we saw a cow in a field in which there was no natural spring of water, but in which a well had been dug, and a pump erected to supply the defect. The cow had enjoyed many a delicious draught from a trough placed beside the pump; but,

* By George Combe.—Vol. iii. No. 9, p. 48.

on the occasion alluded to, it was empty, while the thirst of the animal was fiercely excited by a burning sun: she first anxiously examined the trough, then put her nose to the spout of the pump, as if endeavouring to suck out the water, which she seemed distinctly to know issued from that aperture. This effort also was in vain: she then moved round to the handle of the pump, which was so low that she could have moved it with her teeth or by her horns; she laid her head along it, as if recollecting the fact that water came when it was moved; but, as Nature had denied her organs of Causality, she was utterly blind to the relation between the motion of that piece of wood and the flow of water, and she continued standing and suffering without making the least attempt to perform the operation of pumping. In this instance there was the strongest desire for the water; there were eyes and other organs of sense capable of seeing and feeling as acutely as those of man, and there was an obvious manifestation of observing faculties—for she had noticed and recollected the phenomena which attended the supply of water; but there was a complete destitution of the idea of relation between the motion of the handle and the effect which she so ardently desired. Every human being, who is not an idiot, possesses all the organs to a greater or less extent; and, in the most deficient, there is still enough of reflecting power to give rise to the idea of relation between such obvious instances of cause and effect as this, the moment the phenomena are presented in conjunction to the mind: hence there is an immeasurable gulf between the lower animals and man, which the former can never pass without a fundamental change of their natural constitution.

But, although the power of perceiving the relation of cause and effect in simple occurrences is possessed by all, the talent of tracing it in difficult and complicated phenomena is bestowed on comparatively few; and the more numerous and intricate the causes are which combine towards producing an effect, the more highly gifted in this talent must the mind be which shall be capable of tracing all their relations. In short, the highest development of the upper portion of the forehead is then indispensably necessary to success.

It happens, however, that individuals, who, by the pre-

dominance of the knowing organs, are admirably fitted for observation, and for handling details, are, from the very same circumstance, little calculated to discover or appreciate the more profound and difficult relations of causation. Hence such "practical men," as they style themselves, have uniformly been the opponents of every new doctrine in science that required a profound and comprehensive intellect to trace its foundation, relations, and results. Abstract truths appear to such minds vague and impalpable, and their conception of them is at the best feeble and incomplete. They imagine that this arises from the nature of the propositions themselves, and hence regard them as uncertain and unsafe. When at length abstract doctrines have been reduced to practice, they are capable of appreciating them in their results; but, while they remain creatures of the mind alone, their intellects cannot reach them.

The late clamour against Political Economy, and the repeal of the combination laws, has, we have perceived, emanated from these knowing heads alone. The speculations which they have given forth on those topics, have been characterized by a destitution of every thing resembling Causality: they have seized the surface-views of the questions—the first results, as it were; and, incapable of tracing the distant consequences, they have dogmatized with all the arrogance of Self-esteem, unenlightened by real penetration. Every judgment embraces two circumstances—the *facts* presented to the intellect, and the *character* of the *intellect itself.* The latter element is almost uniformly overlooked by persons who have not attained to the practical discrimination conferred by Phrenology; and yet it is nearly as important as the former. If every author were required to print a correct account of his cerebral development in his preface, a great saving of discussion might be effected. We would then acknowledge as authorities only such individuals as possess talents calculated to comprehend the subjects on which they write.

ON THE EFFECTS OF OLD AGE ON THE MANIFESTATIONS OF THE MENTAL FACULTIES.*

To the Editor.

Sir,—Several years ago I had occasion to visit an old and venerable clergyman, but who, from his extreme age, was almost in a state of second childhood.—Occasional gleams of intellect manifested themselves; but in general he appeared insensible to every thing around him, and the contrast between what he had been in the days of his vigour and usefulness, and the mental imbecility to which he was now reduced, was as great as it was affecting. I was then at that period of life when the intellect comes into activity; and, utterly unacquainted with the physiology of the brain, I believed that it was the mind, the immaterial principle itself, which was thus hastening to decay—a consideration, however, which distressed and perplexed me, and gave rise to thoughts and reflections, which the more I pursued the less satisfaction I obtained. Often, since the period to which I have alluded, have such thoughts obtruded themselves on my mind, and still I was unable to obtain any satisfactory solution of the difficulties which they presented to me. If it is the mind or the soul which thus increases with our strength, and decays as our body hastens to dissolution,—Where, I asked, is the proud distinction of mind over matter, if both are thus subject to disease and decay? Where the boasted difference between the body and the soul, if disease and old age affect them both, and equally impair the functions of the one and of the other? I did not doubt the immortality of the soul; I believed, on the authority of Scripture, that the soul at death passes immediately into another state of existence; but still I felt it difficult to conceive how it should at once recover all its pristine youth and vigour, when in the instant before such fearful ravages had been made on its faculties, so as almost, if not altogether, to have destroyed them.

Phrenology has dissipated all these difficulties and perplexities. I no longer believe in the absurd, though popular

* Vol. ii. No. 7, p. 375.

error, that it is the *mental faculties themselves* which grow, and which afterwards wither and decay. The mind is a pure immaterial substance, requiring indeed, in this life, corporeal organs, on which its power of manifestation depends, but which remains the same pure essence whether its organs are soft and flaccid, as in children,—hard and rigid, as in old age,—or inflamed and diseased, as in fever and insanity. The objections brought against Phrenology on the ground of materialism are fast hastening away; but I have thought that hitherto Phrenologists, in refuting this objection, have too often contented themselves with wielding the shield rather than the sword. But why should they stand merely on the defensive, and not carry the war into the enemy's country? That in old age the mental faculties cease to manifest themselves with their former vigour is a fact, whether that fact is to be explained according to the phrenological or the popular theory. The mind, we are told, is degraded and debased by its supposed close and intimate connexion with material organs, so much so, that the step to absolute materialism is almost imperceptible, if not necessary. But how much more is the mind degraded by these objectors, who admit, as they must admit, that it is susceptible of disease and decay, and that its pure etherial essence is, like the body in which it dwells, impaired by age and all its attendant infirmities? Error, indeed, is ever inconsistent; and you will find men who talk about the body affecting the mind, and the mind the body, who yet seem to start with instinctive alarm at the idea of the mind possessing material organs, and who forthwith, forgetting their own previous admissions, launch forth into high-flown, unintelligible—I had almost said nonsense, about the independence of mind upon matter; and *now* our spiritual part is so little affected by its alleged material organ, that the former can manifest its powers in all their energy, whatever may be the state or condition of the latter.

I am well aware that there are few, if any, of the physiologists of the present day who dispute the connexion between the mind and the brain, or who do not believe that the latter is the organ of the former. Our dispute with them, therefore, is narrowed to the question, Is there a *plurality* of organs in the brain? But the public generally have by no means arrived at this point of the controversy. Let an indi-

vidual maintain the opinion in general society, that the brain is the organ of the mind, and he is instantly set down as an undoubted Phrenologist, though he may utterly disbelieve the doctrine of a plurality of organs, the belief of which alone constitutes a Phrenologist. The instance to which I have alluded is not a hypothetical one, but one which actually happened in my own experience. Such then being the popular opinion, and, I may add, the opinion of almost all of our metaphysicians, let me again ask, Which system most raises and ennobles our ideas of man's spiritual essence—that which represents it as liable to change and to decay—or that which believes it to be incapable of any change, and refers the apparent loss or disease of the mental faculties, not to the faculties themselves, but to the material organs on which these faculties depend, in this life, for their manifestation?

I know not how others may feel, but I can state from experience, that the phrenological view has removed from my own mind a thousand difficulties which used to distract and perplex me. I lately called with a friend on a gentleman, who was in precisely the same state as the clergyman whom I formerly mentioned. Though they had been on terms of the most intimate friendship for upwards of forty years, the gentleman had lost all recollection of my friend, and did not know him even after his name was mentioned. I could not help contrasting the very different feelings I had experienced on these two occasions;—now I had no occasion to distress myself with the endless unsatisfactory inquiry which had formerly distressed me. I was fully aware of the causes to which the effects were to be ascribed. It was not his mind which was affected—that had remained, as it has ever done, unimpaired;—its material organ had become stiff and rigid through age, and therefore its power of manifestation had ceased.

I know not if these remarks are worthy of a place in your Journal. They have not the merit of novelty; but sometimes the statement of our experience of the effects which truth produces on our own minds may have an influence on some whom a formal dissertation might fail to convince.—I am, Sir, your most obedient servant, G.

OBSERVATIONS ON THE FACULTY OF TIME, AND ON THE DEAF AND DUMB DANCING.*

We understand that dancing is taught with perfect success to such of the pupils of the Deaf and Dumb Institution of Edinburgh as can afford to pay for it. The number at present enjoying this tuition is eight, and they are of both sexes. To the followers of the old system of mental philosophy, this project has appeared absurd; but on the principles of Phrenology it is as rational as it is benevolent.

The question naturally occurs, Why is *dancing* one of the pleasures of the human race? The love of motion is no doubt an instinctive and primitive impulse of animal nature, for which it is probable that a cerebral organ exists, although it has not yet been discovered. But the love of motion does not account for that species of *measured movement* peculiar to man, called the dance. The pleasures of dancing have been referred to the attractions of fair partners; but the South Sea Islanders disdain to dance with females. Some persons are known to dance with much zest alone; and Captain Parry's crew, when frozen up in hyperborean darkness, danced with great glee. These instances are fatal to that hypothesis. It will perhaps be said, however, that Captain Parry's sailors danced to keep themselves warm! But why did they *dance* to keep themselves warm? why move in *measured* time, when less regular motion would have served the same end? It is likely that some may take refuge in "the inspiring power of the music," as the proper explanation. But, on the one hand, music is a distinct pleasure, and can be, and often is engaged in, without even suggesting the dance; and, on the other, the most precise and accurate dance may be performed without music. The South Sea Islanders dance with perfect accuracy, and not without grace, to the beat of a rude drum, as devoid of music as an inverted washing-tub; and who has not seen a party of soldiers dancing to a drum, without even the accompaniment of a fife? It is impossible to dispute, that any person who can dance at all, may do so with perfect truth and grace to the measure—

* By James Simpson.—Vol. ii. No. 5, p. 134.

for music it is not—of a well-beat drum. We are now advancing. In Shakspeare's days a dancing movement was called a measure :—

> "Say to her, we have measured many miles
> To tread a *measure* with her on this grass."
> *Love's Labour Lost.*

"If any man doubt me, let him put me to my purgation. I have trod a *measure*. I have flattered a lady," &c.
As You Like It.

"Now tread we a *measure*, quoth the young Lochinvar."
Marmion.

Why a measure? what is measured? Certainly not *space ;*—and the only other subject of measurement is *time.* Time, therefore, is measured in the dance by certain pulsations of the feet, and corresponding movements of the body, repeated at certain intervals of accurate and regular recurrence. This regulated measurement of time is called rhythm, and is a source of pleasure in its application to other movements besides those of the dance, namely, to music itself; and to versification, of which it is the soul and essence : a failure in rhythm, where rhythm is essential, is painful ; and the dislike, amounting to horror, which afflicts a very sensitive classical scholar when a false quantity grates upon his ear, is only a confirmation of the truth, that a desire of just rhythm is a law of his nature. Now, the measure of a hexameter, iambic, or anapestic verse, may, as mere measure, be separated from the poetry, and beat on a drum ; and a good timist—to use a term known to musicians—will recognize and relish the movement. Many persons, indeed, have a habit of amusing themselves by marking time by beating or drumming on any object near them. The dance, then, as a peculiar species of movement, appears to us to owe its origin to the natural appetite for rhythm, which, in the practice of it, is marked by the movement of the feet and whole body : for the head and hands are often busy in the same service ; and it is notorious that the pleasure instantly ceases, and is changed into pain, by a single false step in rhythm.

Now here is a pleasure, *sui generis,* unresolvable into any other. What, then, is it? At this stage all other systems of human nature take leave of us, and Phrenology appears as our guide. This science teaches, *first,* that each primi-

tive faculty or power has an organ in the brain; and, *secondly*, that each faculty seeks its own gratification; in other words, that there is a pleasure in the exercise of each organ. A large induction of facts has rendered it highly *probable*, that the part of the brain marked No. 31 on the busts, is the organ of TIME, and that the exercise of this faculty gives rise to the pleasure of dancing. We have found the organ largely developed in those who shew an intuitive knowledge of the lapse of minutes and hours, so as to name the time of the day without having recourse to the clock; and also in those who perceive those minuter divisions, and their harmonious relations, which constitute rhythm, and who, when they apply the tact to music, are called good timists;—a distinct power theirs from that of the mere melodist, and often wanting in him; while it is matter of the commonest observation, on the other hand, that this sensibility to rhythm, called time, is marked in many who have a very moderate perception of melody. Such persons are invariably accurate dancers, observing delicately the time, though indifferent to the melody of the violin. We have made many observations, both on persons who have both Time and Tune large, and on those who have only one of them in large endowment; and we have never found the manifestations fail. Very lately we were struck with the uncommon prominence of the organ of Time in a whole family of young people, and inquired whether or not they danced with accuracy and loved dancing? We were answered, that they did both in a remarkable degree; and as we lived near them for some weeks, we observed that dancing was a constant and favourite pastime of theirs, even out of doors. Their dancing-master informed us, that the accuracy of their time exceeded that of any pupils he had ever taught. There was thus evident in these young persons an intense pleasure in accurate rhythmical movements.

Phrenology refers that pleasure to a certain organ as its seat, in the same manner as the pleasure arising from the perception of the relations of sounds, called melody, is referable to another organ. But here Phrenology stops, and does not pretend to give a reason *why* the perception of the relation of measured portions of time is pleasurable, more than why the perceptions of the rela-

tions of sound is so.* The reason is obvious why the pleasure is so much enhanced, as it is known to be, when both Time and Tune are gratified simultaneously; there are then two sources of enjoyment in activity in place of one. In dancing also, especially with partners of the opposite sex, a variety of other faculties are called into play, and additional enjoyment results from this exercise. Hence Time is only the fundamental power of this art, to which all the others are accessaries; but it is not the *sole* cause of the pleasure that attends it.

If we have rightly referred the delight which human beings take in rhythmical movements of the limbs and whole body to the gratification of the organ of *Time* as its *basis*,† we are in a condition to understand why this gratification is not denied to the deaf.

If the Quarterly Review (vol. xxvi. p. 404) is to be believed, even the organ of Tune may be excited through other channels than the sense of hearing. The case of Mr Arrowsmith, a young gentleman, deaf and dumb, is there narrated, who, it is said, enjoyed most exquisite perceptions of music, by placing his finger-nails on a piece of wooden furniture in the room in which glees were sung and played. Whatever opinion may be formed of this case, there is no doubt that the organ of Time may be excited through the medium of different senses, but especially those of sight and touch. That time may be marked with the utmost precision to the eye, is a fact familiar to every one who has seen a regiment of soldiers go through the manual and platoon exercise without a single word of command, by obeying the movements of the fugle-man, who gives the time to the eye; and who that has seen this done by a practised corps, is ignorant that there is great pleasure in witnessing

* It is true of both *Tune* and *Time*, that, in order to the perception of the harmonious relations of portions of either sound or time, these portions must be short. The longest note in music occupies a minute portion of time. There is therefore no perceptible pleasure in the perception of very lengthened sounds, or lapses of time. This too may account for the popularity of brisk and rapid movements in music, and especially in the beating of a drum.

† The alliance of other faculties with Time is necessary for perfect dancing, just as other powers, in addition to Tune, are necessary to perfection in music. In the opera, dancing is carried to a very high pitch of elegance, and even of sentiment, which TIME alone will not produce.

the exquisitely timed movements of the exercise? Now suppose a dancer, unaided by music, were to keep his eye on any person who marked dancing time to his sight, it cannot be doubted that he could dance to it. A deaf person could perform the manual exercise from the time given by the fugle-man, and just as easily could a deaf person dance with his eye upon the violin-bow or the player's arm, or on the movement of the drumsticks.

It is unnecessary to go farther, and shew that the sense of touch may be the channel through which the organ of Time is excited, as well as the sense of hearing and sight. No one will dispute that a soldier could perform the manual exercise to a succession of taps on the shoulder; and to time in the same way given might a person dance.

What we have said is confirmed by fact. It is well known that the deaf and dumb do dance, taking the time by the eye either from the violin-player's arm, or at second hand, but instantaneously, from the other dancers. We are acquainted with a young lady and gentleman in England, both of rank, who are deaf and dumb, and who, in addition to many other accomplishments, dance with the greatest grace and precision.

We were allowed, by the polite attention of Mr Kinniburgh, the excellent master of the Edinburgh Deaf and Dumb Institution, to see his *dancing* pupils. We did not see them dance, as their lessons for the season had not commenced, and *their own* violin-player was not present; but Mr K. assured us, that although, like other children, they vary in their respective merits as dancers, there is no difference between their dancing and that of those who have their hearing. We observed, that the development of the organ of Time in all we saw corresponded with the account Mr K. gave us of their aptness to learn and skill in performing the dance. The development was largest in two sisters, Mary and Katharine W——, the best dancers; and smallest in William M——, to whom it was found extremely difficult to teach dancing.

Mr K. confirmed our conjecture, that the deaf dance *by the eye*, which, he says, they keep steadily on the arm and bow of the violin-player. He generally allows one of his own family to dance with the deaf pupils, which aids them

by transferring their eye from the violin to their hearing partner; but this course is by no means necessary.

Such instances are so common as to be known to every one, and we have been habituated to hear them explained by the ridiculous theory, that the dancer's movements are watched by the musician, who adapts the time to them. But while it would be impossible to attain, by so clumsy an arrangement, time, not to say graceful movements, the hypothesis fails entirely when these dancers take their place, as they often do, in the country-dance or the quadrille. There is but one way of accounting for the phenomenon: they dance by the eye, and the fundamental faculty which dancing gratifies, is excited through the sense of sight as well as through the sense of hearing.

By all means, then, let the deaf and dumb be taught to dance; taking care, as essential to the effect, that the rhythm be rendered distinctly visible to them. To accomplish this end, a drum, or tabor, struck very visibly with well-marked motions, may be preferable to the use of a violin or flute. The former will at once guide them by the eye; and if in this, as in many other accomplishments which depend on quick perception, they shall excel many who are not bereaved as they are, we may soon see a quadrille danced in the deaf and dumb school with as much truth, as much grace, and as much genuine glee, as at any gay ball or elegant assembly.

It is one beautiful feature of the science of Phrenology, that whenever it elucidates any hitherto unexplained phenomenon of human nature, it receives an addition to its own evidence from the phenomenon explained. The propriety of referring *Time* and *Tune* to distinct organs is demonstrated by the fact, that time can be marked by the sight, while tune cannot, however such facts as that above stated might lead to the probability that Tune can be excited by the sense of touch.

The brief sketch now offered, will have attained its object, if it shall point out the way to farther observation of the function of the organ of Time, so as to lead to its unquestioned establishment as one of the primitive faculties of man.

ON THE SEAT AND NATURE OF HYPOCHONDRIASIS AS ILLUSTRATED BY PHRENOLOGY.*

On seeing the title prefixed to this article, some of our readers may be disposed to ask, how a disquisition upon Hypochondriasis, or any other disease, happens to find a place in the pages of a Phrenological Journal? A sufficient answer will, we hope, be found in the following considerations.

Hypochondriasis, under its various forms of Vapours, Low Spirits, Ennui, &c. is of so frequent occurrence in this country, that it has been long known on the Continent by the appellation of the *Maladie Anglaise*, first affixed to it by Dr Cheyne. It is indeed so generally prevalent, especially in times of public vicissitude and general adversity, and is so often seen even in the midst of the greatest worldly prosperity, that we question whether we have a single reader who has not, either in his own person, or in that of some near relation, tasted of its pains. In severity also, as well as in frequency, it is often sufficiently formidable. For the misery which accompanies a serious attack, although generally regarded by the ignorant as causeless and imaginary, is, in reality, not inferior in poignancy to any to which mankind is liable; and the dreadful suspicions and gloomy forebodings with which it desolates the mind, and obscures every feeling of happiness, are often so intolerable as to lead their unhappy victim to self-destruction for relief.

On adverting to these facts, the unprofessional reader would be apt to suppose, that, in consequence both of the numerous opportunities of investigation afforded by its acknowledged frequency, and of the magnitude of the interest at stake, no disease could exist, the causes, nature, and treatment of which would be more thoroughly understood than those of Hypochondriasis. But when we state it as a lamentable truth, that scarcely any one malady can be named, in regard to which so much positive discrepancy of opinion obtains, and in the cure of which medical aid is generally of so little avail, it will readily be believed, that some great error in regard to the nature of the disease, or some great defect in the mode of treatment, must have existed

* By Andrew Combe, M.D.—Vol. iii. No. 9. p. 51.

to impede the progress of the profession towards a happier result; and it will then be readily admitted, that every rational attempt to expose the sources of that error, and to provide a safer and a surer guide, ought not only to be received with interest by the members of the medical profession, but to be welcomed in a still higher degree by the public, who are themselves the chief sufferers from the prevailing ignorance on the subject; and therefore, when we add, that Phrenology, viewed as the true physiology of the brain, affords many facilities for the more successful elucidation of the real nature of this disease, we trust we shall have said enough to satisfy even the most scrupulous reader, that the subject is not so foreign to our pages as he may at first have supposed.

The first point which demands our attention, in investigating the nature of any obscure disease, is to ascertain its corporeal seat. Different external circumstances, and different remedies, act more directly upon one part of the body than upon another; some, for instance, act in preference upon the brain, others upon the stomach, and others again upon the kidneys or heart: consequently, as no method of cure can be either judiciously or even safely employed, unless it is exactly adapted to the nature and functions of the organ chiefly affected, it is with great justice held as an established maxim in medicine, that the knowledge of the seat of a disease is half its cure; and, perhaps, no better illustration of the truth and importance of this principle could be wished for than that afforded by Hypochondriasis itself. If, for example, it is, as many have taught, a purely mental affection, having no corporeal seat, then it follows that corporeal causes can have no share in its production, and that corporeal remedies can be of no avail in its cure. If, again, as is generally supposed, and as the name itself indicates, it has its seat in the digestive viscera lying under the false ribs, then it as necessarily follows, that such causes only as tend to act upon these viscera ought especially to produce it, and that its cure ought to be effected by guarding, in an especial manner, against these, and by the administration of remedies calculated to improve the digestive functions. And, lastly, if, as a few late authors maintain, and as we shall endeavour to prove, it has really its seat in the brain, then it ought to spring chiefly from physical or moral

causes acting upon that organ, and through its medium upon the mind; and a mode of treatment providing against these, and adapted to the nature of the cerebral functions, ought to be the most rational and successful,—while tonics and stomachics, which, on the second supposition, are the remedies chiefly indicated, ought, if this view is correct, to be attended, if not with harm, at least with no conspicuous benefit.

Important, then, as the consequences depending upon a right knowledge of the seats of diseases unquestionably are, we shall not consider our time misspent if, in the following pages, we can succeed in shewing that the symptoms, causes, and method of cure of Hypochondriasis, all concur in indicating it to be *an affection of the brain*, and that the derangement of the digestive and other functions, so frequently attending it, are consecutive or secondary only, and not at all essential to its existence.

Dissection after death, taken in connexion with the origin and progress of any disease, is the surest method of detecting its seat. In the present case, however, it is inapplicable, Hypochondriasis proving fatal so rarely as to afford very few opportunities of putting it in practice. Our endeavours, therefore, must be confined to the only method which is practicable during life,—namely, to an analysis of the essential or constituent symptoms; and this is fortunately sufficient for the purpose.

To arrive with certainty at a knowledge of the seat of any malady by analyzing its symptoms, we must constantly be guided by, and never for a moment lose sight of, a principle in itself simple and undeniable, and in its results of the highest importance, but which, nevertheless, is too often neglected,—namely, that no function can be deranged without a previous or concomitant derangement of the *organ* which performs it. *Vision*, for instance, can never be affected, unless the *eye* is disordered; nor hearing, unless the ear is diseased; nor digestion, while the stomach remains unaffected; and, consequently, when we perceive any function impaired or exalted, we are as certain as if we saw it with our eyes, that the organ which performs that function is in a morbid state. From this undeniable proposition it follows, that if, in any given disease, we can prove that a *particular function is the only one which is*

INVARIABLY *affected*, we are entitled, by every rule of logic, to hold, that the disease must have its seat in the particular *organ* of that function. Such, accordingly, is the principle, and such the mode of reasoning, by which we endeavour, at the bedside of the patient, to detect the seat of his malady, and upon the soundness of which alone the choice of all our remedies in fact depends.

To the conclusiveness of this mode of proceeding may be objected, first, our imperfect knowledge of the physiology or functions of some parts of the body—in consequence of which we may, even after ascertaining what function is disordered, still be unable to say by what *organ* it is performed, and, of course, what is the seat of the morbid cause; and, secondly, the occasional occurrence of deranged functions, not from disease in their immediate organs, but from *sympathy* with remote parts. The former obstacle is, in fact, that which has so much retarded our medical knowledge of insanity, and for the effectual removal of which we are highly indebted to Phrenology; and nothing can demonstrate more clearly the importance of a sound physiology to the progress of medical science than the very fact, that the idea so long entertained, and still so generally received, of Hypochondriasis being an affection of the digestive viscera, arose *solely*, *logically*, and *consistently* from the equally erroneous but long prevalent physiological notion of the *passions* having their seats in the same parts. In admitting this idea, the error lay, not in the inefficiency of the principle, or in the unsoundness of the inference deduced from the premises, but in absurdly regarding the premises themselves as physiologically true, when, as is now known, they were altogether without foundation; and, consequently, had it been known to our predecessors, as it is now to us, that the brain is the corporeal seat of the passions as well as of the intellect, the same principle which led them in ignorance to place the seat of melancholy, hypochondriasis, and other mental affections, in the viscera of the abdomen, would, in knowledge, have led them as infallibly to place it where it really exists, in the encephalon, or brain. Besides, the functions of the brain, in so far as it is the seat of mental emotions, being now pretty accurately ascertained, this objection no longer applies to the

study of the particular disease under consideration, and to which we mean at present exclusively to confine ourselves.

The second obstacle, when narrowly examined, proves to be equally groundless with the first. It may be thus illustrated :—Blindness sometimes arises from worms irritating the intestinal canal, and therefore here is an instance, it may be said, in which the seat of the disease is not in the *eye* or organ which executes the disturbed function of vision, but in a part widely distant, and in which, consequently, the mere knowledge of the deranged function does not lead to the true seat of the malady; and hence the principle is of no practical value. But there is a double fallacy in such reasoning; for in this, as in every other instance, the organ which performs the disturbed function is actually the only one that is invariably affected; and blindness does not occur, except in consequence of a sympathetic, but not less real, morbid state of the eye or of the optic nerve, both of which are essential to vision. This morbid condition of these parts may no doubt result, in some cases, from worms in the intestinal canal; but that it does exist is perfectly undeniable. If it did not, why does not the same intestinal cause *always* produce the same effect upon vision? for experience shews that it does not give rise to blindness in one out of a hundred cases. The only reason is, that in some constitutions the eye is naturally so irritable, and so susceptible of diseased action, that it suffers from such slight causes as in sounder constitutions would have been altogether without effect; and hence we are still authorized to hold, that in every disease in which vision is impaired or altered, the eye, or organ which executes the function, must of necessity be disordered. This disorder may arise from external causes acting immediately upon the eye itself, or it may result from sympathy with remote parts; but still it must exist, and therefore it forms no exception to the principle above stated. The second point of the fallacy is this :—If the blindness arises from sympathy with the irritation produced by worms, the latter, being the *cause*, must necessarily exist *first*, and manifest their presence by symptoms indicating derangement of the digestive functions, and thus lead, *by the very principle objected to*, to the intestinal seat of the original malady, and

to a treatment calculated to effect its cure, and, of course, also to remove the blindness, in so far as it has arisen from sympathy. Accordingly, such is actually the fact in nature. In the cases alluded to, worms first shew themselves by variable appetite, impaired digestion, irregular bowels, &c.; and *then* the blindness supervenes. In short, it stands to reason to admit, that before we can ascribe blindness to the influence of intestinal worms, we must *previously* have had some symptoms or proof of their existence; so that, even in the supposed exception, the principle contended for leads us straight to the true cause or seat of each disease.

Arguments like that just refuted have often been employed, and with the most pernicious effects, to shew that all the varieties of mental derangement have their seats in the chylopoetic or digestive viscera, and not in the brain or organ of mind. The attention has thereby been diverted from the investigation of the true causes, theory, and cure of insanity, and countless miseries have thus been heaped upon the heads of its unhappy victims. But the application of the same principle at once exposes their fallacy, and proves that insanity never arises from such causes, unless in individuals whose brains are, either from hereditary constitution or accidental circumstances, strongly predisposed to unhealthy action: and it shews, moreover, that disorder of the mind, like impaired vision and every other function, arises, in ninety-nine cases out of a hundred, from causes operating directly upon its material organ, the brain; and that, in a great majority of cases, the deranged digestion and other secondary ailments are the effect, instead of being the *cause*, of the disease in the organs of the mind.

From the preceding observations it follows, that had our acquaintance with the functions or physiology of the brain been as complete as it is with the physiology of many other less important organs, and had our inquiries and our practice been uniformly regulated by the principle above laid down as the sole foundation of a sure diagnosis and safe method of cure, no such diversity of opinion as that which now exists in regard to the nature of Hypochondriasis, and no such self-contradiction among the ablest and most esteemed authors, could have occurred. We could not then have found such men as Dr Whytt, whose work on nervous diseases is still a standard treatise, in one place declaring

Hypochondriasis and Hysteria to be affections of the same kind, the one having its seat in the *alimentary canal* and the other in the *uterus;* and subsequently, in another place, obliged, by *opposing facts*, to add, that they have *not always* their seats in these parts, but often arise *from other unknown affections of the body*—as if the disease could change its seat, and still be precisely the same, and manifest precisely the same kind of symptoms! Neither could we have found an able physician and accurate observer like M. Louyer Villermay, who has lately written on this subject, involving himself, as he will presently be seen to do, in the most glaring contradictions, and cutting down his own opinions at the root with the sharp and unsparing edge of his own facts. Nor would Drs Gall, Spurzheim, Falret, Georget, and a few others, have been the only men who, guided by a sound physiology and strict adherence to principle, have travelled over the same vast field of uncultivated inquiry, and advanced almost invariably consistent and useful opinions founded on the solid basis of consistent facts.

The importance of the leading principle being thus demonstrated, and the futility of the objections to which it is liable being exposed, we proceed to make a practical application of it to the study of Hypochondriasis, and, first, to determine *what function is the only one, a derangement of which invariably attends, and therefore, we may say, alone constitutes, Hypochondriasis.* This point being ascertained, we naturally hold the organ by which that function is performed to be the *seat* of the disease.

Fortunately little difficulty attends this first branch of the inquiry; for, on perusing the delineations of the disease, as given by the most experienced physicians, or on carefully examining the cases which come under our own observation, we find that all the symptoms, without exception, *which are essential to its existence*, point exclusively to the manifestation of the mind as the only function, a disturbance of which invariably attends its occurrence; and that even those writers who contend most strenuously for its abdominal seat never describe any series or combination of symptoms as indicative of Hypochondriasis, unless the mental uneasiness, the "*tristitia et metus ex causis non æquis*," also be present.

Thus Dr Cullen, whose authority in description few will

venture to dispute, characterizes the disease as a "*state of mind*" distinguished by a concurrence of the following circumstances:—Languor, listlessness, or want of resolution and activity, with respect to all undertakings; a disposition to seriousness and timidity; as to all future events, an apprehension of the worst or most unhappy state of them, and therefore often, upon slight grounds, an apprehension of great evil. From any unusual feeling, perhaps of the slightest kind, they apprehend great danger, and even death itself; and, in respect to all these feelings and apprehensions, there is commonly the most obstinate belief and persuasion.* In like manner, the celebrated Heberden, whose portraits of disease are such inimitably accurate copies from nature, sums up a similar description of Hypochondriasis, by likening it to the "dream of a waking man, in which, although perfectly well, he seems to be sinking under the symptoms of every disease; and, although innocent, to be filled with remorse, as if guilty of every crime."†

Such is a short summary of the only kind of symptoms invariably attending and truly constituting Hypochondriasis; and if to these be added what Dr Willis calls "atrocious" headachs returning periodically, giddiness, obstinate watchfulness, insufferable uncertainty of mind and unsteadiness of purpose, then we have the disease pure and complete. It is, no doubt, frequently accompanied with symptoms indicating considerable derangement of the functions of other parts of the body; but these are merely accidental complications, arising solely from the unequal distribution of nervous influence, necessarily consequent upon a morbid action going on in some part of the brain whence that influence is derived; and, therefore, in attempting to determine the seat of the disease, we ought not to suffer ourselves to be misled either by the frequency of their appearance or by their apparent urgency. Dyspeptic symptoms, for example, so generally accompany or follow an attack of Hypochondriasis, that many writers regard the mental despondency as the direct result of the dyspepsia. But an attentive examination demonstrates that Hypochondriasis may occur, not only unaccompanied by any dyspeptic symptoms, but without any other organ than the

* Cullen's Practice of Physic, § 1222.
† Heberden's Commentarii de Morb. Hist. et Curat. p. 71.

brain being at all affected; and, *vice versa*, that dyspepsia may occur without any hypochondriacal affection of the mind necessarily following its attack. This fact, indeed, constitutes the great diagnostic mark between the two diseases. Dyspepsia, being simply a disease of the stomach, is known by the presence of symptoms indicating disorder of the digestive functions, but without any inordinate affection of the mind. Hypochondriasis, on the other hand, being a disease of the brain, is known only by the presence of symptoms indicating a morbid state of the functions of that organ, while those indicative of deranged digestion are often very slight, and not unfrequently altogether absent.

That the manifestation of the mind is the only function necessarily affected in Hypochondriasis is still further evident from the acknowledged difficulty of distinguishing between it and melancholia; and, if our view of the former is correct, then both diseases must be affections of the same organs and of the same functions, and consequently, *as symptoms are nothing more than deranged functions*, both must of necessity shew many symptoms in common: hence the very natural source of the perplexity, and hence why, as Dr Cullen states, it is often impossible to distinguish between them. He adds, that when a distinction can be made, "it is chiefly by dyspepsia being always present in hypochondriasis, and often absent in melancholia."* But if, as we have already shewn, dyspepsia is merely a common complication of Hypochondriasis, and not necessary to its existence, it follows, that dyspeptic symptoms may be absent or present in the one disease as well as in the other; and hence, their occasional presence in Hypochondriasis can afford no just ground, either for distinguishing that from any other disease, or for assigning to it a different seat. That this is really the case is evident from the statement of Dr Cullen himself, who mentions also, that Hypochondriasis often exists "with few or only slight symptoms of dyspepsia; and even though the latter be attending, they seem to be rather the effects of the general temperament, than of *any primary or local affection of the stomach*." Here Dr C. distinctly acquits Hypochondriasis of being a stomachic affection, and affords something like a reversal

* Culleni Synopsis Nosol. G. LXIV.

of his own diagnosis—thus shewing how strongly *facts* concur in proving Hypochondriasis to have the same corporeal seat as melancholia, and in proving that seat to be the brain. This conclusion is, in fact, so irresistible, that Dr Cullen's candour leads him, in another place, to "acknowledge, that he is at a loss to determine how, in all cases, Hypochondriasis and Melancholia may be distinguished from one another, whilst the same temperament is common to both."* Had their seats, however, been in different parts of the body, different functions must have suffered, and different symptoms must have appeared, which would have led at once to as easy and perspicuous a distinction as that already shewn to exist between these and dyspepsia.

Another circumstance, which might have led a reflecting mind to the discovery of the cerebral seat of Hypochondriasis, if it had not been for the soporific influence of established error, is the ever-changing and innumerable host of secondary symptoms which accompanies it. The celebrated Sydenham aptly declares, that the shapes of Proteus, or the colours of the chameleon, are not more numerous and inconstant than the forms of hypochondriacal disorder; Dr Whytt represents it as simulating all other maladies; and Villermay, again, speaks of it annoying the patient, "depuis la plante des pieds, jusqu' au bout des ongles, jusqu' à l'extremité des cheveux." The obvious inference to be drawn from this is, that the disease must have its seat in some part of the body which is intimately connected with and exerts a strong influence over all other parts. Now, the brain alone is such an organ. It alone is the fountain of nervous energy; to it alone all sensations, from the soles of the feet to the tips of the fingers, are referable, and it alone has a constant sympathy with the state of all other parts: the brain alone, therefore, can be the seat of a disease whose influence extends over all other organs.

Amidst such a variety of secondary symptoms, we have already seen that those which indicate derangement of the digestive functions are the most frequently met with; and, on the view of the disease being an affection of some part of the brain, this fact admits of an easy explanation. It is well known, for instance, that wounds and injuries of the

* Cullen's Practice, § 1586.

brain often produce an immediate disturbance in the functions of the liver and stomach, giving rise to nausea, sickness, and vomiting. It is also well known that violent emotions, intense grief, unexpected bad news, and even a fit of anger, produce a sudden cessation and diminution of the digestive powers, and give rise to actual loathing and squeamishness. This is perfectly in harmony with the idea of Hypochondriasis being a mental affection, and having a cerebral seat; since we know that a regular supply of nervous influence is essential to the performance of the digestive process, and that whatever interrupts or vitiates this, whether momentary passion, continued grief, or hypochondriacal despondency, thereby diminishes the active powers of the stomach. That this effect results from the disturbance of the nervous influence coming to these organs from the brain, and not from the passions themselves having an abdominal seat, as was long supposed, is abundantly proved by the interesting and conclusive experiments of Drs Wilson Philip, Magendie, Brachet, and others, but of which our limits will allow us to state only the results.

1*st*, On dividing the pneumogastric nerve, which is the chief medium of communication between the brain and the stomach, and leaving the ends in contact, the process of digestion is a little *retarded*, but still goes on.

2*d*, When the divided ends are separated, or a portion of the nerve is excised, digestion *ceases*, or becomes exceedingly slow.

3*d*, A section or destruction of part of the spinal medulla, or a removal of a portion of the brain, is said to have the same effect.

4*th*, "*Every thing that diminishes the sum-total of nervous influence going to the stomach enfeebles proportionally the process of digestion in that organ.*"

5*th*, Narcotics, administered so as to produce coma, equally diminish the power of digestion.

6*th*, When the process of digestion is stopt by the excision of the nerve, it is capable of being re-established by means of galvanism applied to the nerve.*

After contemplating these results, does it seem at all wonderful that cerebral or mental disease, or even undue

* Medico-Chirurg. Review, No. 16, p. 963.

exercise of brain, should give rise to dyspepsia? Baglivi, indeed, with great justness, assigns this very reason for the generally deficient digestive powers of literary men. Villermay also tells us, that "les personnes qui exercent beaucoup leur entendement ont ordinairement les organes abdominaux faibles et tres sensibles; *il semble que l'activité mentale* ait lieu au préjudice des fonctions digestives. Un mauvais éstomac, dit Amatus, suit les gens de lettres comme l'ombre suit le corps, et il est egalement vrai du moins en général, que l'homme qui pense le plus est celui qui digére le plus mal."*

The kind of secondary symptoms which occurs next in frequency, is that denoting disordered circulation, or a sympathetic affection of the heart. "You will not often find," says Dr Heberden, "any real disease of the heart itself, which gives rise to more violent palpitations than Hypochondriasis, although in the latter the heart remains sound and uninjured." This fact is equally consistent with the cerebral and equally at variance with the abdominal seat of the disease. Not only have we daily instances of purely *mental* emotions influencing the circulating system through the medium of the nerves, and giving rise, in this way, to palpitations, fainting, and even death itself; but we know, that if the mental agitation continues to operate, the affection of the heart, which was at first sympathetic, and unaccompanied by organic change, will, after a time, terminate in irreparable lesion of structure.

Thus, we are told by Desault and Corvisart, that at the commencement of the French Revolution, when the public mind was in a state of insupportable anxiety and suspense between dreadful realities and brilliant hope, *Hypochondriasis and other affections of the mind* became extremely common; and that, being kept up for a length of time by the

* Dictionnaire des Sciences Medicales, t. xxiii. p. 113.

Since writing the above, the author has been consulted by a literary gentleman from America, whose health was greatly impaired in consequence of excessive mental application. Upon being asked if he was in the habit of studying soon after meals, he answered, that "he dared not do so now;" and assigned as the reason, the remarkable fact, that his "digestion was as much under his command as his foot, for he could instantly stop it by intense thinking." This subject is more fully treated of in the author's work on "The Physiology of Digestion considered with Relation to the Principles of Dietetics," Part ii. ch. 4. Edinb. 1836.

continued operation of their original causes, they gave rise in many, not only to sympathetic functional disorder, but also to actual organic disease of the circulating system. Keeping these facts in view, can we be surprised that hypochondriacal despondency, seated in the brain, should disturb sympathetically the regular healthy action of the same important organs?

Sometimes, on the other hand, the secondary symptoms assume the form of pulmonic disease; but who that has witnessed or experienced the convulsive sobbing, heaving, and short irregular breathing, produced by grief, terror, anger, and other passions, proved by Phrenology to be connected with the brain, can have any difficulty in reconciling this with the cerebral seat of Hypochondriasis? The passions, even of a child, often produce an effect upon respiration, which seems to threaten instant suffocation.

All the other forms which Hypochondriasis is observed to assume admit of an equally easy solution, on the supposition of its having a cerebral seat. The very fact of the diversity of symptoms attending it proves its seat to be in some part whose influence extends over all; and where is such a part to be found, if not in the encephalon or brain? and who, that knows how indispensable a due supply of nervous energy is to the performance of every function, but perceives equally well how numerous may be the symptoms and evils arising from its unequal distribution? In short, there is not a single symptom which, on this view of the nature of Hypochondriasis, does not admit of a simple explanation; while there are notoriously many at utter variance with its having any other than a cerebral seat. That seat cannot be in the digestive organs; because, in *every* case of a disease, the particular organ in which it has its seat must of necessity be affected; whereas we have the concurring testimony of all authors—of Cullen, Willis, Heberden, and Villermay himself—that in many well-marked cases of Hypochondriasis there is no disturbance of digestion whatever. Neither can it be in the heart, in the lungs, in the liver, in the spleen, or in the kidneys; because, although palpitations, hurried respiration, and hepatic and other affections, *sometimes* occur in Hypochondriasis, yet they are *not always* present, and seldom appear

until the disease has made considerable progress. The only affection invariably present, and which really constitutes the disease, is that of the mind; and therefore the organ of the mind can alone be the seat of its proximate cause.

Having now discussed both the essential and the secondary symptoms of Hypochondriasis, and found them all in accordance with the view of its cerebral seat, we proceed to an examination of the causes which most frequently give rise to it; and here, too, we shall find our theory confirmed and supported by undeniable facts: For, on comparing those of Hypochondriasis and dyspepsia, we invariably find the causes which act most directly upon the mind, or its material organ the brain, to be most productive of the former, and those which act most directly upon the stomach itself to be most productive of the latter; thus obtaining another safe and certain proof of the difference of their seats.

The principal predisposing causes of Hypochondriasis mentioned by authors are the melancholic temperament and mature age. When we look, on the one hand, to the qualities which characterize the hypochondriacal state of mind, and, on the other hand, to those characteristic of the melancholic temperament, we perceive at once that the latter is distinguished by the marked prodominance of those very mental qualities, the morbid activity of which constitutes the former; and hence the frequency of the disease in such persons naturally explains itself. That this proclivity of the melancholic to Hypochondriasis does not arise from any natural weakness of the digestive organs is evident from the fact, that dyspepsia occurs most frequently and severely in youth, and in persons of a sanguine temperament, who are least of all subject to the invasion of this disease or of melancholia—the very reverse of which ought to happen if the disease were one of the stomach and not of the brain.

The paramount influence of *mental* character, as a predisposing cause, is so admirably stated by M. Villermay, one of the latest and ablest champions of the abdominal seat of Hypochondriasis, that it is difficult to conceive how he could see it so clearly, and yet be blind to its consequences.

"If we consider," says he, "the influence of character, as predisposing to this disease, we shall see the gay, active,

and courageous, little subject to its attack; and, on the contrary, the morose, idle, and apprehensive, very frequently its victims. In like manner, and for the same reason, whole nations and generations are much more susceptible than others. Warlike nations suffer little from it, as do those of a frank, cheerful, and jovial character. But the Briton, naturally *sombre* and pensive, the Spaniard, and the Italian, who are more prone to jealousy and sloth, shew a much greater tendency to this disease than the Swiss, the French, and the inhabitants of the United States. Besides the national character," he continues, "the state of civilization, the form of government, also have an influence. Polished nations, which breathe only for liberty and glory, whose feelings are more acute, and whose passions are mobile and imperious, are exposed in a high degree to disappointments and sorrows, which often give rise to this disease."*

Such is the literal account of the causes assigned by a writer who contends for the *abdominal* seat of Hypochondriasis! M. Villermay's descriptions and observations of facts are remarkable for perspicuity and general fidelity; but such inferences as the above are perfectly inexplicable, except on the supposition of a deficient Causality, and a consequent natural blindness to the connexion between cause and effect. Under the present erroneous systems of philosophy, when an author displays great superiority, in observing, for instance, or in reasoning, he is immediately held to be equally great in all other departments, and his opinions and statements on every subject are received with a deference to which he has no title on the ground of ascertained excellence in one; and in this way the errors of *principle* committed by an observing, but not a reasoning mind, are published and received by the public with all the submission and respect which the individual has a right to only as an observer; and thus the most hurtful doctrines are often elaborated and diffused, to the great detriment of the public. Whether M. Villermay is an author of this kind, and also whether the *influence of civilization, and of different forms of government*, ought most naturally to shew itself upon the abdomen and its contents, or upon the mind and its organ the brain, we leave our readers to decide for themselves.

* Diction. des Sciences Med. tome xxiii. p. 112.

The same author, we may farther observe, gives an explanation of the more frequent occurrence of Hypochondriasis in mature than in early life, which, on our view of its nature and seat, is equally conclusive and satisfactory. He refers it, not, as might be expected from his own opinions, to any difference in the condition of the digestive organs, but solely and justly to a different state of the *mind*. The adult age, he informs us, is the period at which the most tempestuous passions and the most powerful interests are at work, and at which all our resources are put in motion. It is the epoch of ambition, and of the storms and disappointment which follow in its train. It is consequently, he adds, at that period of life that this disease ought to be most frequent.—If Hypochondriasis is a disease having its seat in the brain, or organ by the medium of which these tempestuous passions, ambition, &c. manifest themselves, then M. Villermay's inference is unquestionably sound; but it is positively absurd when applied to his own view of its abdominal seat. How can ambition, disputes, or political revolutions, possibly reach the stomach, except through the medium of the brain?

M. Villermay goes on unconsciously adding strength to the opinion which he disavows, and states, in glaring opposition to his own view, that Hypochondriasis chooses its victims chiefly among literary men, poets, artists, and those who are engaged in severe study, and who are remarkable for an ardent and lively imagination. The mode of life which such individuals habitually lead is itself a very potent cause of cerebral disease. How often do we observe them, intensely absorbed in the creations of their own fancy, engage in the severest and most protracted study, especially towards night, allotted by nature for repose, till the brain gets into a state of excitement and irregular action, which ceases not with the removal of its first cause, and effectually banishes that sleep and repose of which they stand so much in need. Is it wonderful, then, admitting the cerebral seat of Hypochondriasis, that such causes should often give rise to the disease in its most obstinate and intractable form?

Among the *exciting*, also, as well as among the *predisposing*, causes, those which act directly upon the mind and its material organ stand pre-eminent, as is once more dis-

tinctly proved by M. Villermay. He gives the history of about forty cases; and it is worthy of particular notice, that there is scarcely one of them where the disease does not appear to have been, in part at least, produced by anxiety of mind. We are therefore not surprised to find him, with his usual accuracy of observation, enumerating mental distress, the torments of ambition, the loss of parents, of a darling child, of a friend or benefactor, reverses of fortune, unrequited love, the daily indulgence of anger, the torments of envy and of jealousy, political chagrin, the terrible effects of foreign invasion, civil broils, &c., &c., as the most fruitful sources of this and other nervous diseases; and we leave to the reader again to decide whether such exciting causes are better calculated to affect the brain or the abdominal viscera.

We have borrowed thus liberally from M. Villermay, chiefly that we might not be suspected of twisting facts to support our own theory; and we have left no room to add any thing from our own experience, farther than to say, that one of many cases which have come under our notice, and which arose from grief and mental fatigue, terminated in apoplexy, after occasional attacks of epistaxis, and the appearance of other symptoms indicating an affection of the brain, while the functions of digestion, &c. were scarcely at all impaired; thus shewing in the clearest manner the true seat of the disease.

Reading medical works is another very prolific cause of Hypochondriasis, the chief action of which is undoubtedly on the mind and brain. Few medical men escape a greater or less degree of it on commencing their professional studies; and as it is in them purely a mental disturbance, the subject of their alarm varies as they proceed from the study of one dangerous malady to that of another. Thus, Falret tells us, that when the celebrated Corvisart fixed strongly the attention of his pupils upon the organic lesions of the heart, a true epidemic of Hypochondriasis was observed to prevail; the subject of which was in all of them a fear of dying of disease of the heart; and that, when Bayle, on the other hand, drew the earnest attention of his hearers to the consideration of pulmonary consumption, they also became hypochondriacal, and fancied themselves dying of phthisis.*

* Falret de l'Hypochondrie, et du Suicide, p. 389.

This fact also shews that the affection is truly one of the organ of the mind, and not of the subordinate parts of the body, over whose functions the brain is known to preside.

It may, however, be alleged, that many causes which exert no immediate influence on either mind or brain, nevertheless sometimes occasion Hypochondriasis; and it may be thence inferred that its corporeal seat is not cerebral. To this we answer, that there are many *indirect* causes of this as of every other disease, which, taken alone, throw no light upon its seat. Among these may be reckoned the sudden retrocession of eruptions, the suppression of accustomed evacuations, sedentary life, abuse of spirituous or vinous liquors, &c.; all of which are enumerated among the occasional causes of Hypochondriasis, but might with much greater propriety be ranked among those of disease in general, since they act not upon any part in particular, but upon that which is either constitutionally or accidentally the weakest and most susceptible of a morbid change: and as the weak part differs in every individual, the same *general* cause may give rise to a variety of diseases. The suppression of hemorrhoids, for instance, will in one individual give rise to apoplexy, in another to inflammation of the chest, and in a third to dropsy; but it is perfectly evident that the mere knowledge of hemorrhoids being suppressed is not sufficient to inform us what part is to suffer the consequences. When such general causes, therefore, do produce Hypochondriasis, we can fairly infer, that there must be some weakness or predisposition to disease, either natural or superinduced, in the organ which is its primary seat; but we cannot infer from them alone what that organ is, or where it is situated.

So far as we have yet advanced, both the physician and the physiologist must have gone along with us; but we propose now to go a step further, and to shew, by means of the very same principle, hitherto so fruitful in valuable results, that *the organ of Cautiousness is the individual part of the brain, an affection of which is alone essential to Hypochondriasis;* and here, perhaps, we shall be followed by the Phrenologist alone—since, to those who are unacquainted with Phrenology, the first obstacle still applies in its full force. In point of fact, however, the reasons assignable for this allocation, are equal in kind, number, and cogency, to those

already assigned for considering it generally as an affection of the brain. Fear, or apprehension of some kind or other, is the only *never-failing* symptom; and the feeling of fear is a function of the organ of Cautiousness alone, and therefore ought to become deranged only in consequence of an affection of that organ. Most of the causes too are such as directly stimulate this faculty to its highest degree of intensity; sometimes it is the bodily health which is the subject of apprehension, at other times it is the fear of disgrace, and at other times the suspicion of plots and nefarious designs. These phenomena are beautifully accounted for by the situation of the organ of Cautiousness. Thus, on one side of it, we have the organ of Conscientiousness, the morbid activity of which, combined with that of Cautiousness, gives rise to that form of the disease characterized by remorse and self-condemnation for the most atrocious crimes. On the lower side of it we have the organ of Secretiveness, which, when chiefly affected, gives rise to suspicion, and to the apprehension of plots laid against life or happiness. At its posterior part we find Love of Approbation, which, joined to Cautiousness, gives rise to a third form characterized by the fear of dishonour and disgrace. Adjoining it in front we find the organ of Acquisitiveness, disease of which, joined to that of Cautiousness, occasions that fear of poverty and ruin which is so often observed to distinguish Hypochondriasis. These circumstances thus afford a striking confirmation of its peculiar seat.

Supposing the malady to be principally an affection of the organ of Cautiousness, we perceive at once how it happens that the intellectual faculties often retain their vigour unimpaired and their functions unaltered, and that the patient is as sensible and rational as ever on any subject unconnected with the ground of his apprehension; and we also see not only the inutility, but the positive mischief, of treating the patient as if his fears were purely imaginary, when his own consciousness tells him so strongly that they are real. But our limits being nearly exhausted, we are obliged to pass on to the last branch of inquiry, and to shew that the *modus operandi* of those remedies which have been most successful in the cure of the disease, likewise affords the most direct and powerful support to the idea

which we entertain of its seat. But here too we must be brief.

The first and most indispensable requisite for curing Hypochondriasis is *the discovery and removal of the exciting causes.* These we have already seen to be, in general, such as act upon the mind and its material organ, rather than upon the viscera of the abdomen; and it is of no small importance to be aware of this fact, otherwise the exciting cause may inadvertently be left in full activity, and consequently the best devised remedies prove of no avail. In more than one instance which has come under our own observation, this mistake has actually happened. Tonics, bitters, and exercise, were prescribed, but with little good effect; and the general health suffered severely, until accidental change of circumstances relieved the mind, by removing the cause, and then a cure speedily followed. Which of the two theories of the disease is more likely to lead to the discovery of the true cause we leave the reader to determine from the data already before him.

There is almost no disease in which the aid of medicine has been of less use than in that now under consideration. Lieutaud fairly advises the hypochondriac, as his best remedy, to fly from the physician and from medicine—*Fuge medicos et medicamina;* and Tissot tells us, "*At vero morbus profecto rebellis et vix curationis capax.*" Considering, however, the number of cures accomplished by nature alone, and the proof which this affords that there is no intractable quality inherent in the disease itself, we cannot but suspect that this want of success has arisen very much from an erroneous method of cure, founded on mistaken views of the seat and nature of the disease. If, for example, it is, as we contend, a cerebral affection, and a physician has been accustomed to treat it as stomachic, his want of success is easily accounted for; and, on referring to medical works in general, it will be seen that this has been the case to a considerable extent; and it will also be found that, while solely stomachic remedies were of no use, those which, either intentionally or accidentally, acted upon the mind and brain, were invariably productive of the best effects.

It might be supposed that we should here enter into a discussion of the medical treatment in detail. This, how-

ever, neither our limits nor our inclination will permit. We are anxious that every educated person should know enough of the constitution of the human frame, and of the diseases to which it is subject, to enable him more completely to second the intentions of Nature in avoiding the causes of disease, and in co-operating in the work of his own restoration, and in the rational treatment of sick friends and dependants; but we are no advocates for dabbling in medicine. The *medical* remedies for the present disease must obviously be as various as the causes and KIND of morbid action are different; and to adjust their administration to particular cases, therefore, requires that knowledge of the adaptation of remedies to particular states of the system which none but a professional man can attain. The organ affected being the same, and the function disordered being likewise the same, whatever the cause, it is obvious that the prominent symptoms must be the same; and, trusting to these, the unprofessional reader might be apt to prescribe the same treatment for an affection of the organ depending upon an inflammatory as for one depending on a mere nervous excitement, and hence much mischief might be done. This subject we cannot now pursue, and therefore pass on to that part of the treatment which is applicable to every case, since its efficacy depends only on avoiding any injurious stimulus to the part diseased, which may in general be done if we are acquainted with its functions and its relations to external nature.

For example, if Cautiousness and Conscientiousness are the organs chiefly affected, any one who is acquainted with the functions of these and the other phrenological faculties, will not have much difficulty in avoiding every thing calculated to excite these to activity, and to increase the painful remorse and contrition already so hurtful to the patient, —or in gently stimulating the other sentiments of Hope, Veneration, and Benevolence, and also the intellectual faculties, so as to leave those diseased as much as possible at rest, and to sustain and cheer his mind by opposite emotions. If, again, Secretiveness was joined in diseased activity to Cautiousness, and the patient spent his days and nights in sleepless anxiety and apprehension of conspiracies, the Phreno-

logist would have no difficulty in avoiding the whole range of these faculties, and in subduing their activity, by leaving them without external stimulus, and by exciting others to a higher degree. And, in like manner, whatever the diseased feelings are, he would be able to see their scope and to avoid their excitement.

Another advantage which an acquaintance with the philosophy of mind affords, is the facility with which it enables us to avoid many other sources of irritation tending to increase the disease. Thus, knowing the intimate connexion and mutual influence existing between the mind and brain, we perceive at once, that whatever in any way increases or keeps up the action of the brain beyond a proper degree, whether it is grief, fear, anxiety, reading, thinking, or writing at unseasonable hours, or the irritation of bad digestion, or other secondary causes operating upon a naturally active brain, must be carefully guarded against in attempting its cure. In cases clearly arising from sympathy with deranged digestion, it often happens, from inattention to this constitution of the mind, and from an idea that the real disease being in the stomach no harm can be done by leaving the brain to itself, that the affection of the latter is altogether overlooked, and the disease aggravated by its injudicious exercise; and thus actual organic disease of the latter is often induced, where, with a little attention, it might have been prevented.

In conformity with the cerebral theory of Hypochondriasis, we have the concurring authority of Dr Cullen, for considering the treatment of the mind as "the most important article of our practice in this disease." He adds, in talking of watering-places, that they do greatly more good by entertaining and relieving the mind, than by the mere virtues of the mineral with which the water is impregnated. This opinion is strongly supported by the well-known fact, that there is no cure to be found for those pretty numerous cases originating in sudden retirement from occupation and activity to idleness and indolence, (as in a person retiring from business, or a soldier at the end of an active campaign,) unless some new stimulus to the mind can be brought into play. When the rich merchant retires from the toils of business to seek the *otium cum dignitate* of a country life, it is not the stomach which first

complains of the change; it is the weary mind alone which, left without an object on which to expend its energies, is beset with ennui and *tedium vitæ*, and the bodily ailments are the result of the universal sympathy of the brain with all the other parts of the system. In allusion to this fact, Baglivi, a celebrated Italian physician, exclaims—"Siquidem fateri vix possem, quantum verba medici dominentur in vitam ægrotantis, ejusque phantasiam transmutent: Medicus namque in sermone potens, et artium suadendi peritissimus, tantam vim dicendi facultate medicamentis suis adstruit, et tantam doctrinæ suæ fidem in ægro excitat, ut interdum vel abjectissimis remediis difficiles morbos superaverit; quod medici doctiores, sed in dicendo languidi, molles, ac pene emortui, nobilioribus pharmacis præstare non potuerunt." *

Other observations occur to us; but we must conclude with adding, that travelling, riding on horseback, and other kinds of exercise, have been found useful auxiliaries in exact proportion to the degree in which they occupy and distract the mind, and that local remedies, applied to the head, have not unfrequently been most effectual even in relieving the dyspeptic and other secondary symptoms.

ON THE BEST MEANS OF MAKING CONVERTS TO PHRENOLOGY.†

Every person who is known to be capable of estimating cerebral development, and drawing inferences from it, is liable to be solicited to examine heads and draw sketches of character; and, in general, the request is prefaced by a declaration, that the result, if successful, will greatly tend to produce belief in him who desires the experiment to be performed. We have always discountenanced this method

* Baglivus de Praxi Medica, p. 138. In English thus: "I can scarcely express how much the conversation of the physician influences even the life of his patient, and modifies his complaints. For a physician powerful in speech, and skilled in addressing the feelings of a patient, adds so much to the power of his remedies, and excites so much confidence in his treatment, as frequently to overcome dangerous diseases with very feeble remedies, which more learned doctors, languid and indifferent in speech, could not have cured with remedies of superior power."

† By George Combe.—Vol. ii. No. 5, p. 130.

of propagating Phrenology. While the principles on which the phrenologist proceeds in forming his sketch are unknown, the views at which he arrives must necessarily appear empirical; and it is of no advantage to the cause to induce mere belief, without rational grounds, in any one, however respectable he may be. It is sometimes replied, that an exhibition of this kind will create a presumption of the truth of Phrenology, and present a motive to inquire seriously into its merits. But if the existence of numerous phrenological societies, and the facts recorded in the published works, do not appear, to any individual, to afford such evidence of the probable truth and importance of the science as to induce him to study it, then his mind must be so constituted, or so engaged with other pursuits, as to render his accession to the cause of no importance. It is a great error to imagine that every man must necessarily become a phrenologist before the truth of the doctrines can be established. Phrenology, although interesting and useful in a high degree, is not so simple a study as to lie at the finger-ends of every one who chooses merely to look at a bust or plate; and the thoroughly informed disciple feels not the slightest wavering in his faith, nor imputation on his judgment, although some wise friend, in profound ignorance of the subject, shake his head, and complacently smile, and declare that he does not believe in Phrenology. Like every science, it requires a mind at once acute, profound, and comprehensive, thoroughly to understand it in all its bearings. Any ordinary individual, indeed, who proceeds impartially to investigate its merits, may arrive at a conviction of its truth, and be able to reap advantages from its practical application; just as men in general may work in the arts with a moderate knowledge of their principles, without requiring to become equal to Davy or to Watt. To arrive, however, even at such an acquaintance with Phrenology, *ideas* of its principles, of their application, and of the facts by which they are elucidated and supported, must be obtained. If, therefore, any one wishes to make a convert of his friend, let him commence by explaining the reasons why the functions of the brain were so long of being discovered, namely, because they were studied by dissection and by reflection on consciousness, neither of which methods is capable of leading to valuable results;

—let him next shew, that the phrenological mode, by comparing mental manifestations with cerebral development, is free from the objections which attend the former practices; —let him point out the possibility of instituting and following up this comparison, by shewing the very great extent to which heads differ in size and form in particular parts, and the very decided differences which exist in the talents and dispositions of individuals;—next, let him direct the attention of the inquirer to the numerous casts which are exhibited as proofs and illustrations of the principles;—and, finally, let an appeal be made to nature. By this process, the understanding will be enlightened; and any belief which may follow will be philosophic conviction, and not blind credulity. The convert so made will necessarily remain true to his faith, because it will be impossible for him to doubt in opposition to evidence sufficient to produce conviction. If the evidence should be found insufficient, then by all means let the inquirer not only disbelieve, but proclaim his disbelief, join the opponents, and endeavour to disabuse mankind of the error attempted to be imposed on them.

PHRENOLOGICAL REMARKS ON THE MOTTOS OF ARMORIAL BEARINGS.*

A HABIT of thinking phrenologically gives a tendency to reduce all the phenomena of life and human affairs to their elements in the primitive and well-distinguished springs of human word and deed. Happening lately to notice the motto of a coat of arms on a carriage in the street, which spoke plainly a particular sentiment, it chanced to occur to us, that, as it is likely that the chooser of a family motto speaks out the prevailing feeling of his mind, the family character, at least its founder's—in other words, the original predominating family organization—might be inferred from the armorial motto, and the accompanying crest, which is generally a hieroglyphic or emblematical design, expressing the same sentiment with the motto itself. We thought it probable that the books of heraldry would shew a great

* By James Simpson.—Vol. v. No. 18, p. 205.

preponderance of selfish over social feeling in the earlier mottos. The founders of families, in rude times, would of course be proud of the qualities by which they rose; and although these were seldom just and merciful, the motto and crest would hold out the laconic boast to the world. We expected that next to the boasters would come the worshippers, the *preux chevaliers* of chivalry, who bent the knee alike to their king, their mistress, and their God; and that, of sentiments not selfish, Veneration would figure in heraldic blazonry, and Hope, that never-failing impulse of the ambitious. We did not expect more than a sprinkling of Justice, and little, if any, Mercy at all.

With these anticipations, it was interesting to open heraldic works, both English and Scottish, and observe how far we were correct. We were nearly so, and precisely in the above order. With the exception of Firmness, which forms an element in many mottos,—and which may mingle in a combination of faculties for ill as well as for good,—the great majority ascend no higher in the scale of dignity than the twelve lowest faculties, embracing the animal propensities and lower sentiments. A considerable number ascend to Veneration, not just so many to Hope, more than we expected to Conscientiousness, and a very few to pure Benevolence.

Beginning with the lowest class of feelings, we find these in some mottos in their unmingled degradation. For example, mere Destructiveness comes forth in such legends as these—*Strike—Strike hard—Spare nought—Gripe fast.** Destructiveness with Combativeness dictated—*Through—I dare—Fortiter—On bravely*—an arrow for crest, with *It lacks not a bow—I make siccar*, with a hand and dagger for crest, adds Caution to Destructiveness, and was the murderous boast of Kirkpatrick, who re-entered the *church* of the Dominicans at Dumfries to *finish* the Cummin, whom Bruce, under Veneration, said he *doubted* he had killed.—"*You doubt! I'll make siccar.*" Acquisitiveness, Secretiveness, and Caution, suggested the grovelling family motto of *Lock siccar;* while, *Thou shalt want ere I want*, aspires to no higher than the ambition of the strongest hog in a swine-stye. However this unseem-

* We give all the mottos in English, although many of them are in Latin and French.

ly motto may, as it must, have described the founder of the noble family to which it belongs, we can answer for its contrast to the sentiments of the present representative. He has an easy course before him; let him *reverse it*, and mark the time as a truly proud epoch in his family history. *Forth Fortune and fill the fetters* would also be improved by a change to *Forth Fortune and break the fetters.* Rising in the scale, but still in the regions of selfishness, are most of the boastful mottos of the warrior. Of course these manifest Combativeness always in alliance with Self-esteem, variously modified by Firmness, Love of Approbation, Cautiousness, and Hope. *I have decreed*—is Self-esteem and Firmness. *I saw, I conquered*—is Combativeness and Self-Esteem; as are, *I advance—I am ready—Foremost if I can—Stronger than enemies, equal to friends—To what shall I not ascend.—Stand fast—In defence—Steady*—arose from Combativeness and Firmness. *Glory victory's reward—Never behind—Death rather than disgrace—Fear shame*—have reference to the world's opinion, and therefore spring from Love of Approbation, in combination with Self-Esteem.

Cautiousness, when powerful, would not be concealed even in a warrior's motto, as in *On-slow—Beware the bear—Bravely but cautiously.*

Hope may well be expected to predominate in minds subjected to all the chances of war and consequent vicissitudes of fortune; accordingly we have—*I hope—While I breathe I hope—I live in hope—Hope nourishes—By hope and labour—They go high who attempt the summit.* Self-Esteem mingles largely in this last. We lately met with a singular example of this motto expressing the ruling feeling. A man rather below middle rank happened to come to us often for professional advice. We observed in him the qualities of unreasonable sanguineness and great love of show. He died, and left a widow and children nearly destitute. Among his effects there was a costly watch, chain, and seals, almost new, worth not less than sixty guineas, which it was perfect insanity for a person in his circumstances to have purchased. Of course there was a crest on one of the seals, and we were curious to observe the motto. It turned out to be, "*Spero meliora*—I hope better things." Still with Self-Esteem for a basis, Secre-

tiveness lends its aid in some minds to constitute the favourite sentiment. For example—*Never shew your rage—I bide my time.* This declaration of cherished revenge is a singular *melange* of Self-Esteem, Destructiveness, Secretiveness, and Cautiousness.

Veneration, as Veneration, if unmixed with the baser feelings, which lead to bigotry and persecution, has nothing selfish in it; and when expressed on the warrior's shield, has higher claims to our respect. Its manifestation in rude times was, it is true, for the most part superstitious, and for that reason it is not entitled to be classed with Conscientiousness and Benevolence, unless it is found in company with them—*Salvation from the Cross—Glory to God—While I breathe I will trust in the Cross—From God, not from fortune—Worship God, serve the King——Aymer loyalty—With good-will to serve my King—One God—One King—One Heart.* These and many others were probably mere effusions of Veneration, and have nothing in them to shew that they were more. But we might conclude true religious feelings to belong in addition to the mind, where Conscientiousness prevailed so decidedly as to appear upon the shield. For example:—*To the lovers of justice, piety, and faith—Boldly and sincerely—Be just and fear not—Candidly and steadily—By courage, not by craft—Every one his own—Do right and trust—Faithfully—Judge nought—Keep tryst* (contract)—*Probity the true honour—Virtue the sole nobility—To be rather than to seem—High and good—Sound conscience a strong tower—The palm to virtue.* Last of all comes Benevolence, and it is like a gleam of sunshine in the midst of a storm, to see its mild and beautiful countenance in the ages of pride, cunning, and ferocity; but it is but thinly sown. *Be brave, not fierce—Clemency adorns the brave—That I may do good—That I may do good to others—Do all good.* And last, though not least, as a sentiment on the blazon of the warrior who fights for peace, a direct condemnation of war in the motto, "*Bella, horrida bella.*"

In the continued struggle against power, which the history of both ends of our island records, it would be strange if on armorial bearings there were no expressions of the love of liberty,—that fruit of a fine combination of Self-Esteem, Conscientiousness, Benevolence, and Firmness.

We have, accordingly, such mottos as, *Liberty—Liberty entire—Country dear, liberty dearer—I have lived free and will die free.*

The mottos which indicate the reflecting powers, as maxims of wisdom, were rare in rude times, unless we take those for such as express the higher sentiments; as, *Virtue the sole nobility*, &c. We have, however, lighted upon one which is purely intellectual, and we quote it, because it happens to be eminently phrenological. *Nihil invita Minerva.* It is vain to expect excellence without the genius from which it springs.

It would greatly increase the interest of this communication, were it permitted us to compare the actual history of distinguished families with their armorial legends. But although public history is public property, family history is not, and we are therefore denied that advantage, and must be content with recommending to the reader to apply such knowledge of private families as he possesses to the very harmless end of making the comparison between it and the family arms for himself. We do not entertain a doubt that in many instances they will be found strikingly coincident.

PHRENOLOGY APPLIED IN THE EDUCATION OF A YOUTH.*

To the Editor.

Sir,—The subject of this letter, when a child, was remarkable for an active spirit, combined with much good nature, and the purest simplicity, amounting even to bluntness of manner. When sent to school to learn to read, he made the least possible progress, and afterwards, when an attempt was made to teach him Latin, he stood absolutely still. His father and mother were almost in despair, and feared that he would turn out a blockhead, fit for the mortar-tub, or the pick and shovel, but destitute of capacity for any liberal pursuit. As a last effort, they sent him to board with a celebrated teacher in the country, in the hope that the discipline of the seminary might rouse his latent faculties, if, in fact, he possessed any. Here, however, his progress was

* By George Combe.—Vol. i. No. 4, p. 505.

as little flattering as before. He was made the fag of boys older and stouter than himself, or even, I suspect, of some of his own age; and, as for learning, he could not be brought to comprehend a single rule of Latin, and scarcely was able to master three sentences of French: in geography and arithmetic he was very little more successful.

In this state of matters, Dr Spurzheim arrived in Scotland, and a gentleman who attended his lectures imagined that the case might not be so hopeless as was conceived. He examined the boy's head, and declared that the mystery was cleared up. He found the organ of Language very decidedly deficient, and the knowing organs in general not large; while the reflecting organs were far above an average in point of size for that period of life. Combativeness he found rather small; while Cautiousness, Conscientiousness, Self-esteem, Love of Approbation, Firmness, Adhesiveness, Benevolence, and Ideality, were all amply developed, and Destructiveness was not deficient. Tune also was large. He pointed out that the boy's proneness to active sports indicated a healthy condition of the brain; that his softness of disposition arose from deficient Combativeness joined with large Conscientiousness, Cautiousness, Benevolence, and Love of Approbation; that his inaptitude for languages was owing to the small development of the organ connected with the requisite faculty; and that his general dulness arose from the knowing or perceptive organs being on the whole but moderate in size, while those of reflection, which were decidedly large, did not come into full activity till a later period of life, and did not, till then, meet with studies and pursuits suited to their gratification. He advised, therefore, that the youth should be taken from school, and sent for three or four years to learn the trade to which it was intended to bring him up; and that, afterwards, at the age of seventeen or eighteen, his education should be begun anew.

This accordingly was done, and with the happiest effects. When he had passed the age of puberty his manner greatly changed. Instead of the raw, blunt, timid boy, he acquired a sedate, shrewd, and intellectual expression of countenance; and, although he continued extremely bashful and embarrassed in company, it was easy to perceive that thought was now active, and that the previous vacuity of mind, which

had alarmed his relations, had entirely disappeared. His studies were now directed entirely according to his development. He was absolved at once from all drudgery with Greek and Latin; but told that, as he was destined to move in the rank of a merchant and manufacturer, it was indispensable that he should be master of his own language, and even know a little French. He, therefore, at seventeen, set about learning English grammar; and having now the aid of his reflecting powers, he apprehended, as intellectual perceptions, what as a child he was utterly incapable, owing to his deficient organ of Language, of learning by rote. He studied French at the same time, and profited in his apprehension of the English construction, by the stronger illustrations of concord and government which that language affords. He soon succeeded so completely as to write a correct and precise English style; and he could also read a French author with facility. His other studies were geography, algebra, and mathematics; and in these also he now took pleasure,—stating distinctly, that he saw the *principle* and application of them, and obtained from them food for reflection. His next courses were chemistry, natural history, natural philosophy, and anatomy; and the pleasure with which he followed the lectures on these branches of knowledge was intense, and his improvement proportionally great.

Among other subjects, he was led to the study of Phrenology, and I shall allow him to speak for himself on this topic. "As to Phrenology," says he, "I am convinced I owe as much, if not more, to it than to any other of my studies. The extreme diffidence, which formed so remarkable a feature of my disposition, arose partly from natural timidity; but it was greatly aggravated by my being conscious of deficiency in some intellectual powers, compared with other persons; and entertaining most exaggerated notions of the impediments which these defects threw in the way of my attaining even ordinary proficiency in any thing. In short, before I knew Phrenology, I was persuaded that I was a blockhead, and my whole character and conduct were on the point of being formed and regulated on this principle. When, however, I was told that my timidity arose from a deficiency of Combativeness, joined with large Cautiousness, Conscientiousness, and Love of Approbation, I felt

the truth of the observation instinctively; and as I have a good Self-esteem, and no deficiency of Firmness, I felt as if a mountain had been taken off my shoulders, and hoped that I should yet be able to hold up my head in society. The knowledge also, that the confidence of many of my associates, whose presence of mind I had envied, and attributed to great intellectual superiority, arose merely from larger Combativeness and less Cautiousness than mine, gave me additional courage; and I found that this theory of their dispositions was correct, not only by observing their heads, but by comparing with it their manner and conduct when boys, and discovering how beautifully it explained them. I had a natural tendency to implicit belief in all that was presented to my mind, and took every one's pretensions for actual attainments; and in this way could never feel that I was half wise enough to act on my own opinion, if any human being chose to call it in question. Phrenology gave me an invaluable insight into character, and enabled me to distinguish the chaff from the wheat; and also to try my own views by the standard of nature, and not by the mere notions of other men. The knowledge of character which it has communicated is as valuable as at least ten years' experience of the world would have been to a mind such as mine. My timidity and want of confidence are naturally so great, that I can scarcely imagine the time when I would have had courage to place myself in situations calculated to afford experience. Possessed of Phrenology, I feel myself invested with something like the invisible ring of the fairy tales: I enter into society with an instrument which enables me to appreciate individuals with truth and accuracy; this knowledge makes me know my real situation, and feel safe; and then I am enabled to act without fear or embarrassment. Phrenology has placed my mind at peace also with itself. I know my deficiencies, and avoid reliance on them; while I know also the powers that are given, and the purposes to which they may be applied; and gratitude to Providence, with a due feeling of responsibility, have succeeded to fear and diffidence, which can never exist in a high degree without some portion of discontent. Much, therefore, as Phrenology is despised, I must always regard an acquaintance with it as one of the happiest circumstances of my life; and have no doubt that others will

entertain the same opinion when they are practically acquainted with its truths."

CASE OF A MECHANICAL GENIUS.*

When engaged, several years ago, in the study of Phrenology, I had the pleasure of becoming acquainted with Mr S., a gentleman whose cerebral development struck me from the first as very remarkable, and the complete accordance of whose manifestations with it strongly tended, if not to satisfy me of the truth of the science, at least to encourage me to undertake a very extensive series of observations, which ultimately ended in a perfect and sincere conversion.

When I first saw Mr S., he was about sixty years of age, of a short stout make, rather inclined to corpulency, but possessed of great natural activity. His head was altogether of great size, broad in all its parts, and somewhat higher than usual. In the situation of the organ of Constructiveness, immediately above and behind the external angles of the eyes, the temples projected so much outwards, as, at a little distance, to bring them into the line of the forehead; which presented that squareness of aspect adverted to by Drs Gall and Spurzheim as characterizing the heads of eminent mechanicians, sculptors, painters, and artists. The forehead was broad, and the lower part, or superciliary ridge, projected considerably over the eyes, indicating a great development of Weight, Size, Locality, Form, and Individuality. These faculties, combined with Constructiveness, constitute the essential elements both of an inventive and an operative genius. This combination was aided by greater than usual development of Number and Tune, and by a very good Comparison and *fair* Causality. The external angle of the eye in the situation of the organ of Number, was depressed like that of Jedediah Buxton in Dr Spurzheim's plates, and the forehead rose to a considerable height with a slight slope. The organs of Ideality, Colouring, Order, and Language, were

* By Dr Andrew Combe.—Vol. i. No. 4. p. 509.

decidedly under an average, and Eventuality was only moderate.

This statement of itself would enable any phrenologist to predicate the kind of intellectual character which the individual would display. For the sake of the less advanced reader, however, I shall shortly state *how* the faculties manifested themselves in point of fact.

Mr S. received almost no education. At a very early age he was sent to school to learn to read; but instead of minding his letters, he began to shew a peculiar talent and liking for mechanics and construction, of which his parents highly disapproved, and which they did every thing in their power to repress, but in vain. Finding the continual restraint under which he was forced to live at home becoming daily more irksome as his faculties continued to expand, he, while yet a boy, with a confidence in his own untried powers, which great size of brain so generally gives, forsook the paternal roof, and set out, he knew not whither, to push his fortune. On his arrival at L——, after various vicissitudes, he obtained employment in a profession calculated to exercise those peculiar powers with which nature had so liberally endowed him, and by his excellence in which he ultimately attained wealth and eminence. But the regular calls of business were by no means sufficient to afford an adequate outlet for his mental activity. His leisure hours were *most actively* spent in inventing and constructing models of all kinds of machinery, in fruitless attempts to discover the perpetual motion, in simplifying the air-pump, in improving the diving-bell, in making carriages to go by machinery, in attempting to regulate the motion of balloons, and in innumerable other things, upon which he expended much money and no less labour, but with intense delight. At one of my visits he shewed me a large garret-room filled with the collected models of past years, the whole of which, as his great Constructiveness gave him the power, were made by himself. His wife used often to mention, as illustrative of his *hobby*, that the first time she heard of the existence of her "future beloved," was one day in passing along the bridge of ————, where she saw a crowd gazing intently on the water below. She inquired at what they were looking, and was told that it was "Mr S—— *at the bottom of the*

river in his diving-bell;" and she shortly after saw him emerge.

In the works on Phrenology, it is stated that mathematical talent depends on a combination of Size, Form, Locality, and Number, and that it does not require great Causality. In Mr S ——, all these organs, except Causality, were decidedly large. He was never taught mathematics; but, on coming to maturity, he studied them in books with great success, and was ever afterwards in the constant habit of applying them to determine the probable results of such new or untried combinations of mechanical forces as he was desirous of forming; and he rarely failed to obtain an accurate solution of the most complicated and novel questions.

His Tune, as already stated, is large; and it is a curious fact, that one of his first constructive efforts was made to provide himself with an instrument by which he might gratify it: he afterwards followed the profession of a musical instrument-maker, in order to gratify Tune and Constructiveness at once. When I last saw him, he had just finished a small instrument like a piano in miniature, but with only *one* string, upon which he was able to play several airs. It was intended as a standard by which to tune instruments in the country, as, from all the notes being struck upon the same string, it could not go out of tune. This instrument was entirely the result of an analysis of the causes of the difference of sounds produced by strings of different lengths. I saw him when engaged in the calculation, and expressed my opinion of the impracticability of the scheme; upon which he explained the principle to me, and said that he could not fail: and in a few days more he shewed me the instrument complete, and allowed me to examine it minutely, so as to satisfy myself of his perfect success.

With a great deal of enthusiasm and power of invention in his favourite pursuits, Mr S. has extremely little of that kind of imagination which is dependent on a great endowment of Ideality, the organ of which is in him decidedly deficient. The "beau ideal," and the glowing and coloured conceptions of the poet, are to him as empty sounds. His intellect is plain, penetrating, and solid; but with somewhat of a tendency to vulgarity and grossness, the na-

tural result of an imperfect education upon such a brain. Language is little developed, and he has always felt much difficulty in expressing his ideas. He feels great delight in the practical study of natural philosophy.

The development of the organs of the propensities and sentiments in Mr S. is also remarkable; but I have already encroached too much on the patience of the reader to think it proper to enter into farther detail: I shall therefore only add, that the manifestations corresponded in every point. I am not at liberty to publish the gentleman's name; but the accuracy of the facts stated may be relied on.

ADDRESS TO STUDENTS OF LOGIC AND MORAL PHILOSOPHY.*

The object of the Logic and Moral Philosophy Classes is to make you acquainted with the elements of the human mind, and to elucidate the practical duties deducible from its constitution and relations to external objects. If these classes realized the purposes for which they were instituted, a young man of common capacity and diligence, who had completed the course of study prescribed by them, should, in every thing connected with mind, exhibit the same practical superiority over the uninitiated, which is displayed by an educated chemist over the common observers of physical phenomena. But nothing is farther from the truth than that he possesses any such advantages. Every educated man, when he enters into the business of life, discovers that, in judging of human nature, in directing it, or in regulating his own conduct, he can draw few practical principles from the doctrines taught in universities, under the names of Logic and Moral Philosophy. There are two causes for this disseveration of knowledge from utility. The first is the erroneous constitution of these classes, and the second the want of a real philosophy of mind; the latter, however, attributable not to any deficiency of talent in the respectable professors who teach these branches of knowledge, but to their misfortune in having been elevated to their station before the philosophy of mind was discovered.

Professor Jardine, in his "Outlines of Philosophical Edu-

* By George Combe.—Vol. vi. No. 22, p. 191.

cation, illustrated by the method of Teaching the Logic Class in the University of Glasgow," (Oliver & Boyd, 1825,) gives the following historical account of the circumstances which preceded and gave rise to the institution of classes for teaching logic and metaphysics:

"The ancient history of the church informs us, that considerable differences of opinion, as to doctrine and ritual observances, subsisted even among the primitive Christians. In the beginning of the sixteenth century, however, when letters had revived, and the Reformation had made some progress, the topics of religious controversy were gradually multiplied; and, as these topics, at the era in question, were always more or less associated with speculations of a metaphysical nature, the addition thus made to the number of philosophical disputes formerly agitated, not only opened a wider field for the exercise of the dialectician, but suggested the expediency of paying more attention to the manner in which the process of attack and defence might be conducted. The combatants on either side, accordingly, recurred with increased earnestness to the study of Aristotle's Analytics, which, abounding in nice distinctions and definitions, in abstract notions and general terms, supplied them with the means of maintaining an interminable disputation, without once entering into the merits of the subject upon which it turned: and thus the controversialist, although incapable of securing a decisive victory, was never in danger of an irreparable defeat. As soon, therefore, as the utility of the syllogism for this purpose was discovered, the knowledge of its form and structure, of *predicables*, of *categories*, of *figure* and *mood*, and the ready application of that instrument to each particular case, became the chief object of study in all seminaries of learning. The young academician had no sooner entered college, than he was taught to arrange all his notions in strict logical order, and agreeably to the rules of art, for the purpose of syllogistic exercises. *Theses* on controvertible subjects were regularly proposed; and the students, having taken their side, were encouraged by the masters to display their skill in the use of this intellectual weapon, and to call into action the various resources with which it supplied them. In process of time, the taste for this species of intellectual combat became very general. Disputations, no longer confined with-

in the walls of colleges, were frequently carried on in public assemblies, convened for that express purpose, and consisting of persons of the highest rank in church and state. The immense numbers who attended these public exhibitions would appear to us altogether incredible, did we not recollect that we are speaking of occurrences which took place before the invention of printing; when such occasions furnished the only opportunity which the learned enjoyed for displaying their knowledge and talents, or which fell to the lot of the uninstructed for receiving information on philosophical and religious subjects. Like the knights-errant of chivalry, or like the pugilists of our own days, the keener disputants of those times went from place to place in quest of adventures; challenging, every where, those who had obtained the highest reputation for success in syllogistic competitions.

"The topics selected for those controversial disquisitions, were naturally taken from the favourite studies of the age. A variety of abstract questions, on different subjects of philosophy, employed, at that period, the attention of monks and schoolmen, one of which was usually propounded for discussion; and, as the same views were constantly singled out for disputation, and the same points repeatedly maintained in their debates, the logicians of every district, according to the opinions which they severally supported, were naturally arranged in different parties, and distinguished by different denominations. One of the most celebrated of these philosophical controversies was that so long maintained between the *nominalists* and *realists*, which, as every one knows, was carried on with so much violence and acrimony, as actually to threaten the public peace, and, on that account, to call forth an edict from Louis II. of France, prohibiting all disputation on such inflammatory subjects. In short, the restless and vehement passions of mankind, which, in more recent periods, have found ample scope in political agitation, and in religious controversy, were usually found, during the times in question, to exhaust their strength, and gratify their malignity, in such abstracted and frivolous discussions as those to which we have alluded.

"This literary phrenzy was still further increased by the distinctions and rewards which were conferred upon those who, as expert logicians, had signalized their zeal or ability

in defence of the church. The titles of Bachelor, Master, and Doctor, remunerated their first exertions in support of the orthodox faith; whilst a long line of preferment, from the simple benefice to the papal chair, was opened up to the more ambitious, to stimulate their ardour in repelling the attacks of heretics, and in upholding the authority of the ancient belief.

"It was during this triumphant period of Aristotle's authority, that the plan of education in the principal academical establishments of Europe was reduced into some sort of a system; on which account it is not surprising that the first place in it should have been given to his logic and metaphysics. Having once obtained this place in the scheme of public instruction, our ordinary views of human nature enable us to explain why, in certain circumstances, they should have been permitted to retain their rank, as objects of human study, long after the causes to which they owed pre-eminence had ceased to exist. It may not perhaps be so easy to account for the singular fact, that, even at the present day, the treatises just mentioned are, in many seminaries of learning, allowed to hold an almost exclusive possession of the schools, during the principal part of the academical course."

When we consider that classes instituted under such circumstances were, from the first, destitute of all practical utility, and that the manners and attainments of society have greatly altered since, we cannot doubt that they are now farther than ever removed from all rational connexion with the affairs of life.

The second cause to which the absence of practical utility in the classes in question may be attributed, is the want of a real philosophy of mind. Professor Jardine observes that, "among the causes which contributed to retain the metaphysics and logic of Aristotle in the course of academical study, we ought also perhaps to *regard the difficulty of substituting in their place any other more efficient system of instruction*;" which amounts to a confession, that no science of mind deserving of the name existed when he wrote. Professor Jardine, a man distinguished for good sense and a sound practical understanding, was appointed to the chair of logic and rhetoric in the University of Glasgow in 1774,

and he gives the following account of his own experience of the logic class, both as a student and a professor.

"Having myself attended the logic class in this university, I remember well the general impression which was made upon my mind by the lectures then delivered; and also the opinion which was entertained of them by the more intelligent of my fellow students. The sentiment which universally prevailed among us was, that though the professor explained the subjects of which he treated with great perspicuity and distinctness, yet no useful or permanent effects could possibly result from his prelections, either in the way of promoting activity of mind, or of establishing sound scientific principles. So far from affording any inducement to the study of philosophy, the ancient metaphysics appeared to us only to act the part of a *Cerberus*, in guarding the approach, and in deterring the most resolute from every attempt to enter. Respect for the teacher, rather than any interest in the subjects which he brought before them, induced the more industrious of the students to listen to the lectures with patience, and with a decent degree of attention: yet the well-known attainments of the professor as a scholar, and the benign simplicity of manners by which he was distinguished, could not prevent his class from being emphatically, though rather rudely, designated '*the drowsy shop of logic and metaphysics.*'"

"This conviction of the general uselessness, and even positively hurtful consequences, of spending six or seven months in the study of logic and metaphysics, was not confined to the youth within the walls of the college. From the time that the lectures began to be delivered in English, the eyes of men were opened to the unsuitable nature of the subjects of which they treated; and the defects of the system, as embracing a very important part of public education, became every day more striking, and called more loudly for a radical reform. It was observed by those who interested themselves in this question, that the subjects introduced in the logic class, even when perfectly understood, had little or no connexion with that species of knowledge which was necessary to prepare the student, either for the speculative pursuits of science, or for the active business of life. The local situation, too, of this university, in a great commercial city, where a quick perception of utility, and a

clear insight into the adaptation of means to ends may be supposed to predominate, gave frequent occasion to animadversions on our scheme of preparatory instruction. Intelligent persons, who sent their sons to the logic class, although not themselves proficients in literature, could not fail to observe, that the subjects to which their attention was directed had no relation to any profession or employment whatever; that the discussions connected with them had no analogy to those trains of thinking which prevail in the ordinary intercourse of society; and, in short, that nothing could be derived from prelections on such topics, which was likely, in the smallest degree, either to adorn conversation, or to qualify the student for the concerns of active life.

"About this time, accordingly, some severe strictures were published in Glasgow; the chief object of which was to impress upon the public at large, as well as upon those who were more immediately engaged in teaching, the conviction that universities adhered much too rigidly to the principles on which they were founded, and to the limited objects which they were meant to serve in the scholastic ages,—a period when education was confined to a few churchmen, for whose purposes it was almost exclusively calculated. 'Some of the classes in universities bear evident marks,' it was said, 'of their original design; being either totally, or in part, intended for the disputes and wranglings of divines, and of little use to the lawyer or physician, and still less to the merchant and the gentleman. Of this sort we reckon logic and metaphysics. These arts or sciences (for it is not agreed yet which of them they are) to the greatest part of students are quite unintelligible; and, if they could be understood, we cannot for our life discover their use.' Lord Shaftesbury, in his Characteristics, had previously given an opinion to the same effect. 'Had,' says he, 'the craftiest men, for many ages together, been employed in finding out a method to confound reason, and to degrade the understandings of men, they could not perhaps have succeeded better than by the establishing of this *mock science*.'

"During several sessions after my appointment, the former practice was regularly followed; that is, the usual course of logic and metaphysics was explained by me in the

most intelligible manner I could—subjected, no doubt, to the same animadversions as my predecessor. Though every day more and more convinced me that something was wrong in the system of instruction pursued in this class; that the subjects on which I lectured were not adapted to the age, the capacity, and the previous attainments of my pupils; I did not venture upon any sudden or precipitate change. Meanwhile the daily examination of the students, at a separate hour, gave me an opportunity of observing that the greater number of them comprehended very little of the doctrines explained; that a few only of superior abilities, or of more advanced years, could give any account of them at all; and that the greatest part of the young men remembered only a few peculiar phrases or technical expressions, which they seemed to deliver by rote, unaccompanied with any distinct notion of their meaning. Impressed with this conviction, which the experience of every day tended to confirm, I found myself reduced to the alternative of prelecting, all my life, on subjects which no effort of mine could render useful to my pupils, or of making a thorough and radical change in the subject-matter of my lectures."

He describes the consequences of this mode of teaching, in the following appropriate terms:—

"The evil of persisting in the old system was not confined to the mere loss of a session, and to the sacrifice of the useful knowledge which might otherwise have been acquired by the juvenile student: the effect was of a much more pernicious nature; for, to require the regular attendance of very young men two hours every day, during a session of six or seven months, on lectures which they could not understand, and in which, of course, they could take no interest, had a direct tendency to produce habits of negligence, indifference, and inattention; which, it is well known, frequently terminate in a positive aversion to study of every description."

Professor Jardine made "a thorough and radical change in the subject-matter of his lectures;" and that he accomplished a vast improvement cannot reasonably be doubted. But we proceed to shew, that even his philosophy is far short of what is necessary for "young men destined to fill various and very different situations in life."

He has a just conception of the importance of the philosophy of the mind. He says,

"To the elements of this science, therefore, I have recourse on the present occasion, as the *mother science*, so to call it, from which all others derive at once their origin and nourishment. Thus, logic, metaphysics, ethics, jurisprudence, law, and eloquence, have their common origin in mind; while in all the branches of natural philosophy, the powers of intellect are the instruments, at least, by which knowledge must be acquired. However much these sciences may diverge from one another, in their more advanced stages, and in the practical applications to which they lead, there can be no doubt that they are closely allied in their origin; that they have common principles and a common language; and, consequently, that an intimate acquaintance with the phenomena of mind must form a suitable introduction to the study of every branch of human knowledge."

He accordingly proceeds to communicate his view of mental philosophy:

"The particular department of mental science which I have selected for the business of this class, is an analysis of the powers of the understanding—perception, attention, consciousness, reflection, memory, imagination, abstraction, judgment, reasoning. The object of this analysis, I need hardly observe, is to communicate distinct notions of these original faculties—their operation and offices—their connexion and intimate dependence upon one another."

The following are the subjects of which he treats, in filling up this outline. Under "Perception," he gives a definition of *power*, and discusses the *relation between cause and effect*, the distinction between the terms *power* and *faculty*, and the meaning of the word *acquire*, when applied to the mind. He treats of sensation, attention, consciousness, &c. in a similar manner, and then proceeds to the application of *these principles of mind* to the explanation of various phenomena of human nature, viz. "The Origin and Progress of Language, and the Principles of General Grammar;" the "Origin and Progress of Written Language;" "Elements of Intellectual Culture;" "Improvement of Perception by the Organs of Sense;" "Improvement of the faculties of Attention and Memory, Culture of Imagination," &c. In the

second part of his work, he gives full details of themes for exercising his students.

There is an analogy between the science of medicine and the philosophy of mind, which will serve for an illustration of our opinion of the real merits of Professor Jardine's course of tuition. An acute and sensible man, uninstructed in anatomy, physiology, and materia medica, but observing, for a long period of life, the phenomena of disease, and the effects of different means of cure, and recording his experience, would acquire a body of information in many respects accurate, and in some instances useful, but wholly devoid of scientific or philosophical principle, and bearing the same relation to the science of medicine that the shepherd of Banbury's calendar of the weather will bear to meteorology, if ever the latter shall become a science. Professor Jardine, under the guidance of his own vigorous understanding and good sense, arrived at many correct views of mental phenomena, and sound principles in grammar, taste, and other topics which formed the subjects of his study; but his whole writings betray the want of a truly scientific view of the elements of the human mind, and of their combinations, and application. His description of the state of metaphysical science continues perfectly just and accurate at the present day.

"It has, perhaps, arisen from the application of a defective analysis, that authors of eminence, even in the present improved state of philosophy, are found to use the various terms, which denote the faculties of the human mind, in meanings extremely different. Ever since the days of Aristotle, philosophers have attempted to found a distinction of the mental powers upon the peculiar nature of their several operations; and yet, so unsuccessful have all their endeavours for this purpose hitherto been, that writers, at no distant period, have disputed whether ideas were not a distinct substance, *per se*, different both from the faculty of perception, and from the object perceived. One philosopher has maintained, that perception and judgment are precisely the same faculty; while an eminent modern author of this country has attempted to identify the two important faculties of conception and imagination. Another class of writers, again, have described the powers of taste, and of moral approbation, as internal senses, innate, and infallible;

whilst others persist in considering them as nothing more than modifications of intellectual energy, subject to the influence of education, of fashion, and of caprice. Surely, if the analytical investigations of pneumatologists had been skilfully conducted, the science of mind, after the exertion of so much talent and industry, during nearly three thousand years, could not have been found encumbered with the numerous imperfections and deficiencies which still adhere to it. The astronomer has ascertained the true principles of the solar system, given names to the stars, and traced the paths of comets; but the metaphysician has not yet succeeded in even defining the limits of his inquiries, or in opening up, by an intelligible division of his subject, a way in which his successors might advance, with any better prospect of success."

The summary here given of the attainments of "*authors of eminence, even in the present improved state of philosophy,*" bears out *our* assertion that, up to the present day, the science of mind is unknown in universities.

Mr Stewart gives testimony to a similar effect, in the following passage, cited by him, with approval, from Monsieur de Bonald:

"Diversity of doctrine has increased from age to age, with the number of masters, and with the progress of knowledge; and Europe, which at present possesses libraries filled with philosophical works, and which reckons up almost as many philosophers as writers; poor in the midst of so much riches, and uncertain, with the aid of all its guides, which road it should follow; Europe, the centre and focus of all the lights of the world, has yet its *philosophy* only in expectation."

Is this state of mental philosophy, then, to continue for ever; or is human genius at length destined to rescue the most interesting of all sciences, from the miserable condition in which it has hitherto languished? The achievement has already been accomplished; and Dr Gall's discovery of the functions of the brain has, in our day, presented mankind with the true philosophy of mind. On one point you and we are not likely to differ, after what has been cited from the works of an eminent teacher, during fifty years, of the old philosophy; viz. that Phrenology can scarcely be *more* useless as a science of mind, than the doctrines which

are now taught under that name; while there are many chances of its being more valuable. But many of you will experience a natural veneration for established authority, and consider it your duty to study and embrace (so far as a phantom can be studied and embraced) the science of mind, such as it is presented to you by the talented and virtuous men who now fill the chairs of logic and moral philosophy, on the ground that, as they are the most profoundly learned, and most deeply skilled in that subject, they must be the best guides to what is useful and true. This inference, however, is overturned by the experience of all ages; and, out of the mouths of professors themselves, we could shew you, that you ought to exercise your own judgment in the pursuit of truth, and that your established teachers are the worst authorities possible on the subject of the merits of discoveries which go to overturn doctrines taught by themselves. We cited several examples to this effect in No. xxi. of this Journal, pp. 31-2; and the following extract from Professor Playfair's dissertation is so entirely applicable to the case of Phrenology, that it almost resembles a prophecy of the manner of its reception and diffusion :—

"When one considers the splendour of Newton's discoveries, the beauty, the simplicity, and grandeur of the system they unfolded, and the demonstrative evidence by which that system was supported, one could hardly doubt, that, to be received, it required only to be made known, and that the establishment of the Newtonian philosophy all over Europe would very quickly have followed the publication of it. In drawing this conclusion, however, we should make much too small an allowance for the influence of received opinion, and the resistance that mere habit is able, for a time, to oppose to the strongest evidence. The Cartesian system of vortices had many followers in all the countries of Europe, and particularly in France. In the universities of England, though the Aristotelian physics had made an obstinate resistance, they had been supplanted by the Cartesian, which became firmly established about the time when the foundation began to be sapped by the general progress of science, and particularly by the discoveries of Newton. For *more than thirty years* after the publication of those discoveries, the system of vortices kept its

ground; and a translation from the French into Latin, of the *Physics* of Renault, a work entirely Cartesian, continued at Cambridge to be the text for philosophical instruction. About the year 1718 a new and more elegant translation of the same book was published by Dr Samuel Clarke, with the addition of notes, in which that profound and ingenious writer explained the views of Newton, on the principal objects of discussion, so that the notes contained *virtually* a refutation of the text; they did so, however, only virtually, all appearance of argument and controversy being carefully avoided. Whether this escaped the notice of the learned doctors or not is uncertain; but the new translation, from its better Latinity, and the name of the editor, was readily admitted to all the academical honours which the old one had enjoyed. Thus the stratagem of Dr Clarke completely succeeded; the tutor might prelect from the text, but the pupil would sometimes look into the notes, and error is never so sure of being exposed as when the truth is placed close to it, side to side, without any thing to alarm prejudice, or awaken from its lethargy the dread of innovation. Thus, therefore, the *Newtonian* philosophy first entered the university of Cambridge, under the protection of the *Cartesian*.

"If such were the obstacles to its progress that the new philosophy experienced in a country that was proud of having given birth to its author, we must expect it to advance very slowly indeed among foreign nations.

"In France, we find the first astronomers and mathematicians, such men as Cassini and Miraldi, quite unacquainted with it, and employed in calculating the paths of the comets they were observing on hypotheses the most unfounded and imaginary; long after Halley, following the principles of Newton, had computed tables, from which the motions of all the comets that ever had appeared, or ever could appear, might be easily deduced. Fontenelle, with great talents and enlarged views, and, as one may say, officially informed of the progress of science all over Europe, continued a Cartesian to the end of his days. Mairan, in his youth, was a zealous defender of the vortices, though he became afterwards one of the most strenuous supporters of the doctrine of gravitation."

Dr Chalmers also bears testimony, in the following elo-

quent terms, to the reception of the new philosophy, by the learned and unlearned, on its announcement:—

"Authority," says he, "scowled upon it, and taste was disgusted by it, and fashion was ashamed of it, and all the beauteous speculation of former days was cruelly broken up by this new announcement of the better philosophy, and scattered like the fragments of an aërial vision, over which the past generations of the world had been slumbering their profound and their pleasing reverie."—*Chalmers' Astronomical Discourses*, Disc. II.

In presenting you with the views contained in this address, we have no desire to manifest the least disrespect to the excellent persons who now fill the chairs of logic and moral philosophy in the Scottish universities. Their situation presents obstacles almost unsurmountable to their adopting the new philosophy; not only because human nature is not equal to the task of stripping itself, at a mature age, of its old opinions, and setting out in quest of new notions, but because numberless theories are propounded in all sciences, which, after enjoying a brief *éclat*, are proved to be unfounded; and established professors ought not to be moved by every wind of doctrine, but to preserve steadiness and consistency in their views, as essential at once to commanding respect, and proving useful to their students. Every sensible person, therefore, who is acquainted with human nature, will admit that venerable teachers ought to be allowed to maintain, or at least may be pardoned for maintaining, the doctrines which they embraced in the maturity of their judgment, undisturbed by discoveries made by younger men, which would totally subvert their systems. They have an equitable title to be allowed the liferent possession of their errors, while these constitute their only stock; and, just as government maintains sinecure or useless offices until the decease of those who have been fairly appointed to them, and then abolishes them for ever,—so would we allow established professors to continue during life to teach the doctrines which they first embraced, and leave these slowly to die out with themselves. The only concession which can be demanded of these teachers is, that they shall not obstruct the inquiries of the youth committed to their charge into discoveries which they themselves may be excused from embracing. By doing so

they perpetuate the reign of error; because it is only after the whole generation who had attained to maturity when a discovery was made have been removed from the scene by death, and been succeeded by younger men whose minds were open to conviction, that new doctrines become established; and every year of delay on the part of the young to investigate is one added to the predominance of error. Your imperative duty, therefore, is to inquire. Your teachers have every apology to offer for not studying and embracing novelties in science; nay, if they even decry and oppose them, their conduct, although not justifiable, may still be excused. But with you no such apologies exist. Your minds are young, vigorous, and full of enterprise, and are not preoccupied by error; you will soon constitute the men of society; and to you will the blame be justly ascribed, if another generation shall be compelled to endure the evils of the mystic speculations under which you now suffer, and to grow up in ignorance of the most important, because the most practical, doctrine of philosophy that ever was presented to the human understanding.

SOME OBSERVATIONS ON THE CHARACTER OF CROMWELL, AS DELINEATED IN THE NOVEL OF WOODSTOCK.*

THE picture of Cromwell in Woodstock is strictly historical, that is, in perfect accordance with what is known of Cromwell's character; and likewise strictly phrenological. There is a certain force and weight in some characters—a moral *momentum*, to which ordinary minds, by a law of their nature, yield as necessarily as a less gives way to a greater physical resistance. Without the slightest appeal to physical force, "they overwhelm and take possession of feebler minds," says Mr Combe, "impressing them irresistibly with a feeling of gigantic power."† Men who, in the hour of political convulsion, rise from obscurity to supreme power; adventurers who have or might have seated themselves on thrones, the Cromwells and the Napoleons, have always borne about them this commanding in-

* By James Simpson.—Vol. iii. No. 11, p. 482.
† *Vide* System, 3d edition, p. 104.

fluence. This is the secret of their rise to power and their security in it; this is the spell which stifles plots against them in the very breasts of those who imagine them; quells mutiny by mere presence—opposition with a look; resumes supreme power, if let slip, without an army, nay, in the face of one; serves as a panoply against assassination itself, surrounding these master-spirits with a charmed circle, which guards their unarmed persons from the hand of vengeance, even when in careless contact with those whose fiercest passions are concentrated against them in mortal hatred and hostility.

A large induction has shewn, that an ample volume of brain in all the three regions, animal, moral, and intellectual, is essential to this influence and force. Bonaparte's head was unquestionably large, and all the likenesses of Cromwell, to say nothing of an actual cast of his face and forehead taken after death, render it certain, that his head was of the same large class, if not of a yet larger. No small head could have maintained for a day the mighty attitude of Cromwell or Bonaparte.

The author of Woodstock has of course passed by the head of Cromwell, but has missed no lineament of his character; and even the reader is made to feel that he is a "tremendous personage:"

> "And there in lofty air was seen to stand
> The stern protector of the conquered land."

The author introduces him receiving Markham Everard's packet from the hands of Wildrake, in the court-of-guard in Windsor Castle. "His demeanour," says he, "was so blunt, as sometimes to be termed clownish; but there was in his language and manner a force and energy corresponding to his character, which impressed awe, if it did not inspire respect."

Wildrake, whose *Veneration* was evidently none of the largest, gets by degrees familiar, and more than once attempts, in very bad taste, to make a companion of the protector; but one glance of his eye frowns him back to his comparative insignificance, and re-establishes that influence from which it was in vain to attempt to escape. "His natural boldness and carelessness of character," says the author, "were borne down and quelled, like that of the falcon in the presence of the eagle."

When Cromwell in mistake turns round the portrait of Charles I. by Vandyke, Wildrake, at the sight, actually for a moment compasses his death, in revenge of the king's. "But this natural and sudden flash of indignation, which rushed through the veins of an ordinary man like Wildrake, was presently subdued, when confronted with the strong, yet stifled emotion displayed by so powerful a character as Cromwell. As the cavalier looked on his dark and bold countenance, he found his own violence of spirit die away, and lose itself in fear and wonder. So true it is, that as greater lights swallow up and extinguish the display of those that are less, so men of great, capacious, and overruling minds bear aside and subdue, in their climax of passion, the more feeble wills and passions of others, as, when a river joins a brook, the fiercer torrent shoulders aside the smaller stream.

"Wildrake stood a silent, inactive, and almost terrified spectator, while Cromwell, assuming a firm sternness of eye and manner, as one who compels himself to look on what some strong internal feeling renders painful and disgustful to him, proceeded, in brief and interrupted expressions, but yet with a firm voice, to comment on the portrait of the king."

The effusion that follows is replete with strength of character; while the same overwhelming greatness is admirably pourtrayed, when Cromwell at Woodstock stations his troopers, and shakes the dwelling of Markham Everard with one determined unrepeated knock; come, as he is, to pounce on his prey like a eagle on a dovecot.

Another trait of human nature is strikingly illustrated by this character, namely, the existence in the same individual of dispositions so contrary, as, in their alternate excitement, to present to us two distinct and, to all appearance, incompatible characters. The idea was long treated as incredibly absurd, that murderers, like Haggart and Thurtel, could, even for a moment in their whole lives, however quiescent their prevalent selfish and ferocious feelings might for that moment be, experience one emotion of kindness to their fellow-creatures, or do one benevolent deed. The most able and popular historians of human nature, however, distinctly recognise characters belonging to this species as actual existences, and place them prominently

on their canvass, as the most powerful touches in their pictures. Cromwell, during the exciting transactions at the lodge of Woodstock, is positively two distinct beings; and these he manifests, by appearing in four several moods, two of them ferocious, and two benevolent.

First, In a paroxysm of rage with Wildrake, who had bearded him with insult, and attempted his life, he gives an order to his troopers to shoot him instantly in the street, and even refuses him spiritual consolation. This act of vengeance appearing to him premature, he recalls his order, and carries the party prisoners to the lodge of Woodstock.

Second, He has got time to calm;—in phrenological terms, the activity of his Self-esteem, Combativeness, and Destructiveness has gradually subsided;—and his next mood is benevolent. He tells Pearson, that he has to force a really benevolent nature in the violent acts to which he is destined.

"'Pearson, the world will hereafter, perchance, think of me as being such a one as I have described—'an iron man and made of iron mould'—yet they will wrong my memory; my heart is flesh, and my blood is mild as that of others. When I was a sportsman, I have wept for the gallant heron struck down by my hawk, and sorrowed for the hare which lay screaming under the jaws of my greyhound; and canst thou think it a light thought to me, that the blood of this lad's father lying in some measure on my head, I should now put in peril that of his son? They are of the kindly race of English sovereigns, and doubtless are adored like to demigods by those of their own party.' 'God be my witness, that rather than do this new deed, I would shed my own best heart's blood in a pitched field, twenty against one.' Here he fell into a passion of tears, which he was sometimes wont to do. His extremity of passion was of a singular character. It was not actually the result of penitence, and far less that of actual hypocrisy,"—(so far we agree with the author; but consider what follows, another added to many proofs, that his delineations of character are better than the philosophical expositions which sometimes accompany them,—) "but arose merely from the temperature of that remarkable man, whose deep policy and ardent enthusiasm were intermingled with a strain of hypochondriacal passion, which often led him to exhibit scenes

of this sort, though seldom as now, when called to the execution of great undertakings." This vague and meaningless generality is the best philosophy which even the author of Woodstock can summon up to explain the simple phenomenon of an alternation of ferocity and kind-heartedness. But the author sometimes, by a farther touch of his pencil, does more to solve his own difficulty, than he ever achieves by a speculation, however solemn. He says elsewhere, "and there were even times when that dark and subtle spirit expanded itself so as almost to conciliate affection;" *phrenologicè*—when Cromwell was kind and generous, in other words, benevolent; for no other faculty of man conciliates affection.

Next, In his *third* mood, when the resistance again rouses Self-esteem, Combativeness, and Destructiveness to the fury of madness, he gives orders for the instant massacre of all the men, women and *dogs*, in the castle. Pearson had proposed to put to the torture the old knight and Dr Rochecliffe; "'by a whipcord twitched tight round their forehead, and twisted with a pistol-but, I could make either the truth start from their lips or the eyes from their head.'" But even in the height of his fury *this* was too much for Cromwell, and his benevolence gleams for an instant with splendid effect on the dark cloud of his unsparing fury. "'Out upon thee, Pearson!' said Cromwell, with abhorrence, 'we have no warrant for such cruelty.'" Then Humgudgeon falls, and is half buried in the ruins of the tower. Destructiveness is again in advance; "with a quick and resolute step, Cromwell approached the spot; 'Pearson, thou hast ruined me—the young man hath escaped. This is our own sentinel—plague on the idiot! Let him rot beneath the ruins which crushed him.'"

Fourth, Cromwell's last mood is that of mercy, and even generosity. He is informed that Pearson "had not fully executed his commands touching a part of those malignants, all of whom should have died at noon. 'What execution—what malignants?' laying down his knife and fork; 'Wretch!' said he, starting up, and addressing Pearson, 'thou hast not touched Mark Everard, in whom there was no guilt, for he was deceived by him who passed between us; neither hast thou put forth thy hand on the pragmatic presbyterian minister?'" &c. He is told that they yet live,

and orders their instant liberation. Rochecliffe is next enlarged and supplied with money. "'But you look darkly at each other as if you had more to say than you durst. I trust you have not done to death Sir Henry Lee?' "'No —yet the man,' replied Pearson, 'is a confirmed malignant, and ——' 'Ay, but he is also a noble relic of the ancient English gentleman,' &c. 'Sir Henry lives, and shall live for me. His son indeed hath deserved the death which doubtless he hath sustained.'" He too is spared, and that before Cromwell is told that it was in Albert's power to have despatched him in the dark passages of the castle. As to Joliffe, he was considered by the general as deserving reward for ridding him of Trusty Tomkins, whom he knew to be a double-dealing knave. Wildrake he declares not worth his while, in spite of his libellous poems; the man and "the very handwriting being drunk."

"'There remains only one sentenced person,' said Pearson, 'a noble wolf-hound, finer than any your excellency saw in Ireland; he belongs to the old knight, Sir Henry Lee. Should your excellency not desire to keep the fine creature yourself, might I presume to beg that I might have leave?' 'No, Pearson,' said Cromwell, 'the old man so faithful to himself shall not be deprived of his faithful dog.—I would *I* had any creature, were it but a dog, that followed me because it loved me, not for what it could make of me.'" He finishes this display of good feeling by ordering decent burial, in consecrated ground, to Tomkins, whose death he had so lately hailed; and to Humgudgeon, whose remains, in hot fury, he had doomed to rot where they had fallen. Until Phrenology unfolded organs of Self-esteem, Combativeness, and Destructiveness, co-existing, in the same individual, with others of Benevolence, Veneration, and Justice, such moods of mind as are here described were utterly inexplicable. To a *feeling* that they are natural, which every one has, we now add an intellectual perception of their truth; and thus both our pleasure and profit are increased by the light which this philosophy sheds on the pages of the historian and novelist.

HISTORICAL NOTICE OF EARLY OPINIONS REGARDING THE FUNCTIONS OF DIFFERENT PARTS OF THE BRAIN.*

ARISTOTLE, with whom appears to have originated almost every theory that has divided the opinions of the learned, taught, that the first or anterior ventricle of the brain, which he supposed to look towards the front, was the ventricle of common sense, because from it, according to him, the nerves of the five senses branched off, and into it, by the aid of these nerves, all smells, colours, tastes, sounds, and tactile affections, were brought together. The second ventricle, connected by a minute opening with the first, he fixed upon as the seat of imagination, judgment, and reflection, because the impressions from the five senses are transmitted from the first ventricle into it, as a second stage in their progress through the brain. The third ventricle was sacred to memory, because it was commodiously situated as a storehouse into which the conceptions of the mind, digested in the second ventricle, might be transmitted for retention and accumulation.

If we apply the principles of Phrenology to these views, we perceive them to be evidently nothing more than the fictions of an exuberant fancy. Dissection, indeed, shews that there are ventricles in the brain, but the keenest eye can perceive nothing in them resembling either sensation, imagination, or memory. Observation is never hinted at as the foundation on which these opinions rest, and consciousness throws no light upon the subject. The assignment, therefore, of functions to the ventricles, connected with these faculties, is altogether gratuitous.

Passing on to a more recent period, we find the same notions repeated by a great variety of authors, with some slight variations, but with few approaches to greater philosophical precision. Bernard Gordon, a Scotch physician, professor of medicine at Montpelier, in a tract entitled "Affectus præternaturam curandi Methodus," written in 1296, (as appears by his own words at the end of the introduction,—"Statuta fuit hæc ordinatio in præclaro stu-

* By W. C. Trevelyan and George Combe.—Vol. ii. No. 7. p. 378.

dio Montispessulani anno Domini 1296, mense Julio, die Mercurij, post festum beati martialis, et quia aliqui ex sociis volunt scire dandum est,")—gives very nearly the same account of the functions of the brain. There are, says he, three cells or ventricles in the brain. In the anterior part of the first ventricle lies "Common Sense," the function of which is to take cognizance of the various forms or images received by the several senses, and to pass judgment upon them. In the posterior portion of the first ventricle lies "Phantasia," the function of which is to preserve the species received by the "Sensus Communis." Hence "Phantasia" is the treasury or storehouse of the latter. In the anterior department of the second ventricle lies "Imaginativa," which never rests in the whole course of life, either in sleep or in watching. Its function is to put ideas together, and it is impossible to exist a moment without it. The preceding faculties, common sense and fancy, compose nothing, but only receive and preserve impressions. They cannot compound a new object out of different affections of the senses. But the imaginative faculty composes chimeras, &c. Hence it has two names. If it be obedient to reason, and the objects imagined have a real existence coinciding with the perceptions of the senses, the faculty is called "Cogitativa." If, however, it does not coincide with the perceptions of the senses, but obeys the faculty next to be mentioned, called "Æstimativa," it is properly named "Imaginativa;" because then the things conceived are false, and probably impossible. In the posterior portion of the middle ventricle lies the faculty named "Æstimativa," the function of which is to judge of impressions not received by the senses, as friendship. By this faculty the lamb instinctively knows the wolf to be an enemy, although it never saw one before. "Æstimativa," therefore, is in animals the instinctive faculty which regulates their conduct, as reason regulates that of man. Hence, when men are regulated by their instinctive faculties, they err, and resemble the beasts in their conduct: when they act by reason, they do not fail in their aim. In the third or posterior ventricle, Memory holds its seat.

Thus, continues the author, there are three faculties or virtues,—"*Imaginatio*, *Cogitatio*, et *Memoria*;" and all

these are natural and corruptible, and have organs. Above them all, however, is another, a higher, a divine, and an incorruptible faculty or virtue, called Intellect, which has no organ, although it makes use of the organs just mentioned as media for acting on the external world.

These faculties, says he, may become imperfect through diseases in the organs; and, as the organs are distinct, one may become affected while the others remain sound. "In some Imaginativa is impaired while the other faculties are sound. In others, on the contrary, imagination is sound, and the other faculties impaired. This is evident from the circumstance of a certain deranged individual, who, having struck his father, and being asked by him if it was becoming in a son to lift his hand against his parent, fell upon his knees on perceiving him, and entreated his forgiveness. In him the imaginative faculty was impaired, and he did not know his father. Reason, however, was entire; and it correctly indicated that a father ought not to be struck." He relates another instance of the same kind, which, from the quaintness of the style, we prefer giving in the words of the author:—"Hippocrates dicit de quodam juvene, quod tenebat unum puerum, et dixit vultis istum? et dixerunt sic, et projecit, et fractus fuit puer; imaginatio non fuit læsa, quia bene cognoscebat puerum. Sed ratio fuit læsa, quia credebat ipsum impassibilem esse."—*Particula Quarta de Prognosticis, Caput* I. pp. 743-4-5.

Several other curious observations of the same kind will be found in another work of the same author, entitled, "Lilium Medicinæ," written in 1305,* in the section "De Passionibus Capitis, particula ii. pp. 186-7, and 193, de Somno Innaturali." He says that sleep is, properly speaking, an affection of the "Sensus Communis," the organ of

* "Ad honorem, igitur, agni cœlestis, qui est splendor, et gloria Dei patris, hunc librum intitulo Lilium Medicinæ. In Lilio enim sunt multi flores, et in quolibet flore sunt septem folia candida, et septem grana quasi aurea: similiter liber iste continet septem partes, quarum prima erit aurea, rutilans et clara. Tractabit enim de morbis plurimis universalibus, incipiens à febribus: aliæ autem sex partes erunt candidæ et transparentes, propter earum grandem manifestationem. Inchoatus autem est liber iste, cum auxilio magni Dei, in præclaro studio Montispessulani, post annum vigesimum lecturæ nostræ, anno Domini 1305, mense Julij. Lugduni, apud Gulielmum Rouillium, 1559."

which lies in the anterior part of the forehead, and therefore all external impressions and animal functions are at rest. Watching, he informs us, is caused by the introduction of the animal spirits to the instruments of sense, thereby exciting them to perform their functions. On page 200 he gives a long list of prescriptions for removing excessive watching, and adds—"Et si omnia deficiunt, incipiat dicere horas dominicas, et statim dormiet." On page 201 he gives a theory founded on the supposed motion of the animal spirits, why the imaginative faculty rests neither night nor day, but pursues a continual course of action;—but our limits prevent us from entering upon it.

To these speculations, also, we must apply the phrenological tests. They are not revealed by dissection, and not supported by observation or consciousness, and therefore they are mere figments of the mind of the author, or of those from whom he adopted them.

The animal spirits make a great figure in these dissertations about the brain. It is therefore interesting to attend to a few details concerning them. Andrew Vesalius, or Wesel,* a celebrated anatomist of the sixteenth century, in his work "De Humani Corporis Fabrica," informs us, that the air which we breathe, penetrating through the cribriform process of the ethmoidal bone, and through the Eustachian tubes, is by rarification rendered fit for the brain, and then insinuates itself into the first and second ventricles, where it is formed into animal spirits. These then pass into the third ventricle of the brain, and thence into the ventricle of the cerebellum. From this ventricle no small portion of them is transmitted into the medulla oblongata, and into the nerves propagated from it. The

* Andrew Vesalius, or Wesel, was born at Brussels in 1514. His paternal progenitors, for four generations, had been of some note in the medical line. In 1564, he attended a Spanish noble, who died while under his care, as he did not understand the nature of the disease. Vesalius opened the body after death, when the heart was observed to palpitate. This circumstance raised a great clamour against Vesalius; and, to save himself, he was obliged to make a pilgrimage to Jerusalem, to expiate his crime (as it was considered). On his return thence he was wrecked on Zacynthus, where he soon after died, in the same year, 1564.

The first edition of his work on the Anatomy of the Human Body was printed at Basle in 1542, in folio. It is a beautiful book, and contains an excellent portrait of the author.

other portion of the spirits, "ad divinas principis animæ operationes utitur," and is likewise transmitted from the ventricles of the brain to the nerves of sense and motion. This author very gravely observes,—"Hactenus sane cerebri functiones in vivorum animalium sectionibus *admodum probabiliter et veré* quodammodo possum assequi." But, continues he, the theologians (Thomas Aquinas, Duns Scotus, Albertus, and others) having divided the functions of the mind into Imagination, Ratiocination, Cogitation, and Memory, have also divided the brain, upon what principle he cannot tell, into parts corresponding to those powers. He refers to Aristotle's division, adopted by the theologians, and according to which Imagination and Judgment were placed in the second ventricle, and Memory in the third; and confutes the hypothesis by the fact, that the parts of the brain to which the rational faculties are given by the theologians, are found in the lower animals to correspond very nearly to the same parts in man.*

In another chapter, Vesalius informs us, that the same theologians conceived that the function of the vermiform processes of the cerebellum is to serve as a medium of communication, by which the phantoms of the mind may pass into the cerebellum, in which Memory is situated, and thence, by stealth, into the middle ventricle, which is the seat of Judgment. Against this opinion, however, Vesalius brings the argument already noticed, that these vermiform processes exist in the lower animals as well as in man, and that, to these animals, both Judgment and Memory are denied by the theologians. These processes, if such be their functions, must in them have been made without a purpose,—a supposition not admissible when the Divine Being was the contriver.* These processes derived their name from their supposed resemblance to a worm or maggot; and from their appearance, their functions in giving rise to phantoms, whims, or maggots in the mind, seem to have been inferred; and hence the phrase "*maggotty*" appears to have had its origin.

* Liber vii. caput i. Edition printed at Basle, 1542. See also caput vi. "Ventriculorum Usus."

† Caput x., de cerebelli processibus vermis imaginem experimentibus, &c.

The notions now detailed seem to have formed the standard philosophy of the mind and brain in the middle ages. The same theories are repeated by every author who touches on the subject; but not one of them appears to have thought it necessary to inquire into the evidence upon which they rest. In a work upon the memory by Lodovico Dolce, a Venetian, published in 1562, precisely the same account of the divisions of the brain and of the mental faculties as that by Bernard Gordon is given. It is unnecessary to repeat his words; but we copy a sketch of the head from his work, in which the seats of the different faculties are marked out in a manner not unlike that of Dr Gall. The work is entitled "Dialogo di M. Lodovico Dolce, nel quale si ragiona del modo di accrecere e conservar la memoria,—In Venetia, 1562." A theory and plate somewhat similar are given by Robert Flud; and also by Peter Montagnana,* in a work published in 1491.

In a work by Dr Thomas Willis, Professor of Natural Philosophy at Oxford, and Fellow of the College of Physicians and Royal Society in London, published in 1681, there is a regular treatise upon the animal spirits, and another upon the uses of the brain, chapter 9th. "De cerebri anatome ostenditur quo apparatu, et in quibus Εγκεφάλῳ locis, spiritus animales progignuntur. Item piæ matris vsus alii, et accidentia subduntur."

The limits of the present essay do not admit of a full account of this learned author's treatise on the animal spirits. Suffice it to notice as specimens the following observations. The most volatile, spirituous, and active elements of the blood, says he, ought constantly to rise towards the head, partly from the natural qualities of the blood, and partly from the natural structure of the parts. The vertebral arteries in all animals ascend in a right and perpendicular line, and thus in a manner cause the subtile and light particles of the blood to be carried upwards, while the thicker parts as naturally descend into the less important arteries and viscera. Accordingly, as the carotid arteries in men rise most perpendicularly to the head, the purest and most volatile spirits are in them carried to the brain; whereas in quadrupeds, which walk with their heads inclined, and

* See Gall sur les Fonctions du Cerveau, ii. 355.

in which the blood is likewise more cold and watery, inferior spirits reach the brain. In chapter 10th, entitled "Description of the Brain, properly so called, and explanation of its Parts and their Uses," it is observed, that the brain is divided into two compartments, or distinct hemispheres, and that it, like the nerves of sense, and the organs of various necessary functions, is double, to the end that any defect in the one side may be provided against and supplied by the other. He repeats the division of the brain into organs very much in the style of his predecessors. He describes the convolutions of the brain, and mentions their resemblance to the intestines of animals in their external appearance. If asked, what are the functions of the folds and convolutions of the brain? he would say, that the brain is made in that manner, as well for the more abundant reception of spirituous aliment as for the more commodious distribution of the animal spirits. The aliment of the brain, he observes, would require to be very subtile and highly elaborated; and on this account the openings ought not to be too large, but rather like the smallest possible pores and canals. The various folds and convolutions of the brain, besides, act as cells and storehouses where the sensible species are reserved, and whence they can be called out as occasion requires. These convolutions, says he, are larger and more numerous in man than in any other animal, on account of the more various and extensive action of his superior faculties. In chapter 15th, upon the cerebellum and the use of its parts, and some of its processes, he mentions, that some of the ancients were of opinion that the cerebellum was just another brain. He observes, however, that if any individual were endowed with an insipid and soft brain, he has great doubts whether he would become wise, even although he should obtain a larger and more solid cerebellum. Others, says he, have placed memory in this part, on the supposition that the cerebellum resembles a cellar or storehouse, into which ideas of things presently conceived, or their images, might be crammed. But it is more probable that this faculty is seated rather in the anterior convolutions of the brain; for, when we endeavour to remember an object long forgotten, we rub the temples and the forehead, we

endeavour to move up the brain, and to excite the animal spirits in that quarter, while no sensation is experienced in the back part of the head. The use of the cerebellum, therefore, appears to be, to supply animal spirits to the nerves of involuntary functions, such as the contraction of the heart, respiration, and digestion.

This author disputes the idea, that the pineal gland is the seat of the soul, or that the principal faculties spring from it, because this gland is found not only in man and quadrupeds, but in birds and fishes; and because animals, to which imagination, memory, and other important faculties of the mind, are entirely denied, enjoy a sufficiently large and well-formed pineal gland.

These authors, it will be observed, do not pretend almost in any respect to found their theories upon observation. To see clearly, however, the true extent and merit of Dr Gall's discovery, it is proper to notice the efforts of some other authors who have attempted this course of philosophizing. Aristotle, we believe, may be ranked among this class of physiognomists; but, to come nearer to the present time, we proceed to notice a work of John Baptista Porta, a Neapolitan, entitled "De Humana Physiognomia." The first edition, which was printed in 1596, at Vico (now an inconsiderable town on the eastern coast of the Bay of Naples), is scarce. Editions of the work, however, in octavo, are not rare in the catalogues of Naples; and the cuts are well copied. This author, in judging of a man's character, would examine every part of the body from the hair of the head to the nails of the toes. (*Vide* book iv., p. 229.) Besides his own ideas, he gives those of his predecessors on the subject of physiognomy: amongst whom are Aristotle, Adamantius, a Greek physician of the fifth century; Rhasis, or Rhazes, an Arabian physician, born in 852; with other Greek philosophers, &c. There are some very excellent observations in the proœmium to the first book, much more philosophical than might have been expected from the character of the work itself. On page 14 there is a curious catalogue by Aristotle of the qualities of the lower animals, which exist also in man. In the second book, "De Capite," he compares human heads with those of animals, and supposes the dispositions of the

former to resemble those of the latter when their heads agree. He gives sketches of the heads of Vitellius Cæsar and of an owl, as similar—of a spaniel dog and Plato, as resembling each other—of a sow and an idiot—of a crane and a very stupid man, as corresponding to each other—of a lion and of a man of genius and sense—of a cow and a phlegmatic individual—of a crow and a man insincere and impudent. He informs us, that Rhasis considered a head of a moderate size and becoming rotundity, which rose behind, and was compressed a little under each ear, as the best. Albertus conceived that a head elongated before and behind, like a mallet, indicated a provident and circumspect individual; Pericles, the Athenian, is said to have had such a head, and to have been a most excellent man. Albertus affirmed, that a round head was destitute of memory and wisdom. It is a dogma, says he, of physicians, that where the head is deficient, mental imbecility is indicated;—if the anterior part is deficient, the perceptive power and imagination are impaired;—if the posterior part, energy and memory are wanting;—if the middle part, reason and reflection. Aristotle, he says, mentions that those who have the temples large or inflated, and the cheeks full, are exceedingly irascible. In Porta's opinion, those who are full round the neck, and have large veins about the temples, are prone to anger. Albertus considered mental vigour and aptitude for learning to be indicated by the length of the head before the ear, which he calls "*longa frons*." Plutarch informs us that Plato possessed such a head; and Neanthes, no despicable author, asserts, on the authority of Diogenes, that Plato received this name on account of his large forehead and face. "Hanc frontem paulo ante nostra tempora Dantes Alaghierius habuit."

There is a great deal more curious matter in this volume, which it is impossible here to notice. The observations, however, which we have already adverted to, though evidently founded on the loosest resemblances between man and the lower animals, and not supported by observation, shew, contrary to the assertion of an Edinburgh Reviewer, that many authors have held the opinion, that different shapes of the head indicate different qualities or affections

of the mind. It is curious also to observe, that on page 4th, a portrait is given of the author's patron, a cardinal, whom he seems determined to convince of the truth of his science, at least by flattery, if he could not succeed in any other way. See the chapter "De Heroici Viri Figura."*

The physiognomical work of Lavater is too well known to require description here. It is well known that he endeavoured, by observing the forms of the forehead and features, to discover the tendencies of the mind; but, from an error in his mode of proceeding, he was as unsuccessful as his predecessors. This great error lay in confining himself too much to the features of the face, and in seeking signs of general character, instead of organs of particular faculties. As many of his observations, however, were drawn from nature, it is admitted that many of them are well founded; but, from his not reaching the true organs of the mind, his views are of no utility as a system of philosophical truths.

It may be interesting also to take a view of the opinions of metaphysical writers, ancient and modern, upon this question. Des Cartes informs us, "that although the soul is joined to the whole body, there is a certain part in which it exercises its functions more immediately than in the other parts. The common opinion," says he, "is, that that part is the brain, or perhaps the heart; the brain, because the organs of sense are referred to it; the heart, because the passions are felt there. But, by careful examination, I am led to believe, that I have ascertained that the part in which the mind particularly exercises its functions, is not the heart, nor the whole brain, but only a certain small gland (the pineal) situated in the middle of the substance of the brain, so suspended above the canal by which the spirits of the anterior portion of the brain communicate with the spirits of the posterior portion, that the smallest motions in it are able to produce a great effect in diverting the course of these spirits; and reciprocally the smallest changes which take place in the course of these spirits produce a great change in the motions of this gland.

* A translation of this work was published at Paris in 1798. The "Physiognomiæ Veteres" were published together on the Continent in 1780; but we have not had an opportunity of consulting them.

" The reason," continues Des Cartes, " which induces me to think that the mind cannot have any other seat in the whole body where it can immediately exercise its functions, except this gland, is this, that I consider all the other parts of our brain as double, as we have two eyes, two hands, two ears; and, finally, as all the organs of our external senses are double, and as we have only single and simple consciousness of any one thing at any one time, there must necessarily be some place in which the two images which come from the two eyes, and the double impressions which come from one object by the other, double organs of sense may be united before they reach the mind, lest they should present to it two images in place of one. And it is easy to conceive, that these images and other impressions unite by means of the spirits which fill the cavities of the brain in this gland, whereas there is no other place in the body in which such an union could take place."

He explains how the mind and body act on each other: " Let us conceive," says he, " the mind to have its principal seat in the gland which is situate in the middle of the brain, it sends out the impressions over the rest of the body by means of the animal spirits, nerves, and of the blood itself; the latter, participating in the impressions of the spirits, is able to communicate them, by means of the arteries, to all the members."*

Dr Hartley says: " What sensations or ideas are, as they exist in the mind or sentient principle, we have no more knowledge of than we have of the mind or sentient principle itself; and, in this ignorance of ourselves, the business of philosophy will be abundantly satisfied, if we be able to point out such a probable affection of the brain as will correspond to all the variety of sensations and ideas, and the affections of them, of which we are conscious.

" And is it not most probable, not to say certain, that since the impression is actually transmitted to the brain, it must be by means of the same kind of motion by which the nerve was affected, that is a vibratory one? And since the *brain* itself is a continuation of the same substance with the nerves, is it not equally evident, that the affection of the brain, corresponding to a sensation, and consequently to an idea, is a vibratory motion of its parts?

* Des Cartes de Passionibus, art. 30. 31, p. 32. and 34.

" The differences of which vibrations affecting the brain are sufficient to correspond to all the differences which we observe in our original ideas or sensations.

" If these original differences in vibrations are sufficient to correspond to all the varieties of our original or *simple ideas*, the combinations of which they are capable must be equal in both cases; so that the number of *complex ideas* creates no peculiar difficulty." *

Dr Darwin, in his Zoonomia, informs us, that an idea " is defined,—a contraction, or motion, or configuration, of the fibres which constitute the immediate organ of sense." § 2. 2. 8.

" Our ideas are also associated together after their production, precisely in the same manner as our muscular motions, which will likewise be fully explained in the succeeding section.

" The time taken up in performing an idea is likewise much the same as that taken up in performing a muscular motion." § 3. 5. 1.

Such, then, is a short abstract of some of the principal opinions concerning the brain which had been entertained previously to the time of Dr Gall. They are so absurd in themselves, and so evidently unfounded, that the more philosophical writers, both medical and metaphysical, during the last century, have abandoned the subject in despair, rather than repeat such ridiculous puerilities. Dr Cullen observes: " Although we cannot doubt that the operations of our intellect always depend upon certain motions taking place in the brain, yet these motions have never been the object of our senses, nor have we been able to perceive that any particular part of the brain has more concern in the operations of our intellect than any other. Neither have we attained any knowledge of what share the several parts of the brain have in that operation; and therefore, in this situation of our science, it must be a very difficult matter to discover those states of the brain that may give occasion to the various states of our intellectual functions." †

Dr Reid, Mr Stewart, and Dr Thomas Brown, the great

* Priestley's edition of Hartley's Theory of the Human Mind. Introductory Essays 1st and 2d.

† Practice of Physic, vol. i. § 1539.

metaphysical writers of the present times, have abandoned the subject of the brain in absolute despair, and make no inquiry into the influence of organization upon the mind. In following this course, however, Mr Stewart at least could not proceed on the notion that such an investigation is unimportant, for he admits its utility while he neglects it.

Dr Brown's observations on the functions of the different parts of the brain are the following:—"In the brain itself, the anatomist is able to shew us, with perfect clearness, many complicated parts, which we must believe to be adapted for answering particular purposes in the economy of life; but when we have gazed with admiration on all the wonders which his dissecting hand has revealed to us, and have listened to the names with which he most accurately distinguishes the little cavities or protuberances which his knife has thus laid open to our view, we are still as ignorant as before of the particular purposes to which such varieties of form are subservient; and our only consolation is —for there is surely some comfort in being only as ignorant as the most learned—that we know as much of the distinct uses of the parts as the anatomist himself who exhibits them to us, and teaches us how to name them."*

We are now prepared to inquire how Dr Gall has succeeded in an undertaking in which so many distinguished men had previously laboured in vain. Dr Gall did not make use of his imagination, and form theories about animal spirits; neither did he attempt, like Des Cartes, to fix upon the portion of the brain which was most proper for the reception of the mind, merely by contemplating its position or structure; nor did he, like Hartley and Darwin, make the smallest inquiry, whether, in the operation of the mind, the brain performed its functions by vibrations, by contractions, or by any other motions. He saw that all such inquiries were absurd. Nor does he pretend to have arrived, by the exercise of a superior sagacity, at the discovery which he claims as his own. He admits that it was accident alone, the true author of so many important discoveries in human affairs, which led him to the principle on which his whole philosophy is founded. He perceived, that a boy, at the school which he attended, had a peculiar development in

* Lectures on the Philosophy of the Human Mind, vol. i. p. 420.

one part of the head, and he observed that he had a peculiar mental power. This led him to compare development of brain with manifestations of mind, and he soon arrived at conclusions totally different from those of his predecessors.

ON THE ADVANTAGES OF EDUCATION.*

THE human faculties consist of animal propensities, moral sentiments, and intellectual powers: they have a natural tendency to activity, greater or less in proportion to the size of their organs; and, being active, each serves to engender certain desires, emotions, or intellectual conceptions, in the mind. The organs of the propensities, namely, Amativeness, Combativeness, Destructiveness, Secretiveness, &c., are the largest; those of the moral sentiments the next in size, and the intellectual organs the smallest. Farther, the propensities and sentiments are mere blind impulses, which lead to happiness and virtue when well directed, and to misery and vice when misapplied. Thus, Combativeness and Destructiveness, when directed by Benevolence and Justice, give boldness, enterprise, and energy to the character, and fit a man for becoming the terror of the wicked and the foe of the oppressor; when left unguided, they may lead to furious contention, indiscriminate outrage, cruelty, and murder. In like manner, the moral sentiments require direction: Benevolence, unenlightened by intellect, may lead to hurtful profusion; Veneration, unguided by reflection, may degenerate into superstition. Lastly, the intellectual powers, having the smallest organs, possess the least natural energy, and not only require the most assiduous cultivation to give them activity, but, being in their own nature mere general capacities of observation and reflection, demand a vast store of knowledge as materials for their exercise. Not only, for example, does the organ of Language require to be vigorously exercised to produce facility in writing or speaking; but, as the mind is not informed by instruction of the meaning of words,—labour and attention must be bestowed to acquire a knowledge of terms,

* By George Combe.—Vol. ii. No. 7, p. 432.

as materials on which the faculty of Language may exercise its powers. In short, Nature, by means of this organ, gives the mind a capacity to learn words, and, after they are learned, to use them; but she does not inspire us with a knowledge of their signification, in the same way as she implants in the bee an instinctive tendency to resort to particular flowers that contain honey. By means of the organ of Causality she enables the mind to reason, and to anticipate results; but this also is a mere general power, and requires for its successful exercise an extensive observation of occurrences and their effects: it does not intuitively anticipate the future; but, after the mind has discovered, by observation, that fire applied to gunpowder produces explosion, it gives the feeling that the same train of occurrences will happen again, and enables the individual to regulate his conduct by the knowledge of this result.

An uneducated mind, therefore, is one in which animal impulses run riot,—strong, vivacious, and undirected; in which moral sentiments sometimes shed the benign influence of their proper nature, but oftener suggest wild wanderings by their misdirected energy; and in which the intellectual powers are obtuse through want of exercise, and inefficient in consequence of the absence of knowledge.

This is a correct picture of a mind entirely in a state of nature. In civilized society some extent of education is forced upon every individual by the intelligence and example of others; but in proportion to the scantiness of his cultivation is his approach to the condition now described.

An educated mind presents a different picture. Happiness results from the legitimate use of all the mental faculties; and the constitutions of the moral and physical worlds, when thoroughly understood, are so admirably adapted to each other, that full scope is afforded in nature for the legitimate gratification of every faculty of the human mind. The first effect of education then is to present the intellectual faculties with materials on which they may act; that is, persons who have received stores of hereditary information, and acquired additional ideas by experience, communicate to the young mind a knowledge of the objects and creatures which exist, and which are the sources of good and evil to mankind. This knowledge constitutes the ma-

terials on which the faculties of the young may act. Thus, a description of particular kinds of industry, or of certain international laws, or of certain domestic institutions, being communicated, the mind, by means of the organ of Causality, takes delight in knowing these, and tracing the good or evil produced by them, and it anticipates the result of new combinations. The intellect, thus provided with knowledge, and strengthened by exercise, is in a condition to discover what form of indulgence is fitted to afford the highest and most lasting gratification to the propensities and sentiments, and it guides and directs them accordingly. Thus, the propensities of Amativeness, Philoprogenitiveness, and Adhesiveness, have large organs, and at an early period of life act with intense vivacity. The individual whose mind is unenlightened by knowledge, whose intellect is unexercised and unaccustomed to control or guide his desires, and whose moral sentiments are not directed to practical objects, will yield to the first impulse, and either resort to the haunts of vice, or marry, regardless of the future and all consequences. Another individual, who has been instructed in the nature of his own physical and mental constitution, trained to perceive distant consequences and to regulate his propensities with a view to the future, and whose moral sentiments have been accustomed to act in concert with, and to support by their dictates the conclusions of his intellect, will have a vivid perception of degradation, disease, and misery, as the result of illicit indulgence; and of poverty, anxiety, and depression, as the consequence of injudicious marriage; and will be fitted, if not in every case to resist effectually, at least to withstand a far higher degree of temptation than the other.

Not only so, but there is a prodigious difference between the actual pleasures enjoyed by the educated and uneducated. The unregulated gratification of the lower propensities is short-lived, coarse, and unsatisfactory; and when the impulse of excitement is over, the moral sentiments enter into activity and condemn the conduct, so that no agreeable emotion arises from reflection on the past. The indulgence of these, on the other hand, under the guidance of the moral sentiments, is pleasing at the time, and not painful on retrospection; while the direct exercise of the

higher sentiments themselves and intellect affords the highest present delight, and the most lasting satisfaction in futurity. The practice of benevolence in the daily duties of life, avoiding all occasions of giving pain to others, and manifesting a warm and sincere regard for their happiness in the little offices of kindness for which the private circle affords so delightful a theatre ;—the exercise of Conscientiousness, in curbing our humours and desires so as not to overstep the boundaries of justice, and permitting and encouraging every indulgence and gratification consistent with duty, to those who are dependent on or connected with us ;—the practice of Veneration in piety towards God, and in habitual deference and respect to our fellow-men, bearing with their weaknesses, and avoiding irritating and humiliating conduct towards them ;—the exercise of Ideality, in appreciating and luxuriating amidst the beauties of nature and of art ;—and the exercise of Individuality in becoming acquainted with the countless objects which exist around us, and their various properties,—of Reflection in tracing their wondrous combinations,—of the minor Knowing organs which are conversant with forms, colours, numbers, music, and their countless products ;—the delight, we say, which the educated mind is capable of extracting from the legitimate exercise of all these faculties, leaves the uncultivated mind immeasurably behind in the very article of pleasure, even supposing enjoyment to be the sole object of human existence.

Let us never hear, then, of a state of ignorance being one of innocence, of purity, and of happiness, or of education unfitting individuals for the practical duties of life.

CASE OF ANN ORMEROD, A GIRL WITH GREAT DEFICIENCY OF THE ORGAN OF TUNE.*

To the Editor of the Phrenological Journal.

Sir,—I beg leave to send you the mask of one of the pupils of the School for the Blind at Liverpool, whose head exhibits a remarkable deficiency in the organ of *Tune*.

Ann Ormerod, aged 14, was admitted into the Asylum

* Vol. ii. No. 8, p. 642.

about two years ago, where she has since remained, with full credit for general good conduct and uniform industry.

It is one of the chief objects of the directors of this excellent institution to teach the pupils music; and indeed this department of the establishment attracts the admiration of strangers, and reflects the highest credit on the talents and ingenuity of those gentlemen who regulate this elegant branch of instruction.

Such is the high degree of perfection at which the blind choir have arrived in the correct performance of the most difficult pieces of music, that their hall on music days, and their church on Sunday, is crowded with fashionable people and strangers, who are principally assembled together by means of this attraction. Under these circumstances, it may well be conceived, that no means are spared to cultivate and improve, in the highest possible degree, any musical talent which the pupils may happen to possess. In the present case, all these means were unsparingly employed, but with such decided want of success, that her teachers (who have allowed me to use their names in this testimony, Mr Handford and Mr Platt), men of unceasing perseverance, and constantly accustomed to the most stubborn perverseness, were, at last, under the necessity of abandoning the attempt altogether. This they did the more slowly, that the girl was by no means deficient in any other respect; on the contrary, she is a general favourite both with governors and pupils.

I shall shortly mention the circumstances connected with my observation of this particular case.

I had naturally concluded that there are few fields so well adapted for phrenological investigation as where individuals, from birth, have been deprived of the use of the sense of sight. There is only one of the primitive powers, viz. Colour, which, for its practical education, depends completely upon this sense; sight, although not essential, is, however, useful in the education of all the Knowing faculties, which may be perhaps as appropriately termed the implements of the two great powers, Causality and Comparison, as the external senses may be in the same manner subservient to the Knowing organs. The only power, to the exercise of which it seems to be opposed, is that of

Concentrativeness (whether that be a special faculty or not). Sight often diverts the thinking power from one topic to another; thus rendering some minds incapable of proceeding long in one channel, or of allowing Causality to exercise its functions continuously, and without disturbance. Amongst the blind, therefore, who are not subject to this source of distraction, and in whom one power is much developed, I have often found it more highly cultivated, *cæteris paribus*, than in those individuals who had the use of their eyes. I have particularly noticed the blind of the lower classes greatly to surpass their equals in rank in judicious conclusions upon affairs which do not often at all rouse the reasoning ability of the poorer classes.

Hence I have found, in the School for the Blind, an exhaustless source of observation, and consequently of confirmation of our science. I owe these advantages to my friend Mr Hay, the able surgeon of the charity, who has enabled me to procure the accompanying mask; who has furnished me with every facility of seeing the blind at all times, and who has favoured me with remarks on their manners and habits, of the most interesting nature to the Phrenologist.

On one of our visits to the Asylum, when the girl Ormerod was brought to Mr Hay for his professional advice, I was so much struck with the formation of the forehead, that I immediately addressed the matron, Mrs L——, with the following remark:—"I should think you would have considerable difficulty in teaching this girl music?" Her answer was, "We were obliged, sir, to give her up in despair." I called the attention of my friend, Mr Hay, to this very strong fact, when it appeared to him of so singular a nature as to induce him to suggest that a mask might be procured. The girl, with her usual good sense and docility, consented to have it done, and I have much pleasure in transmitting to you an example of no ordinary force.

With regard to her own account of this deficiency, she says that she hears the most beautiful pieces of sacred music, and grandest choruses of the *Creation* or *Messiah*, accompanied by one of the finest organs in the kingdom, as if she heard a simple noise; sometimes with complete distaste, often with impatience and pain.

If you think this communication of sufficient importance,

I shall esteem it a favour to have it published in the pages of your admirable Journal. I have the honour to be your obedient servant,

GEORGE DOUGLAS CAMERON, M.D.

August 6. 1825.
4, *Great George Square, Liverpool.*

We are much indebted to Dr Cameron for his attention in procuring and transmitting a mask of this curious case, and also for the preceding communication in regard to the manifestations. The mask shews the greatest deficiency of the development of the organ of Tune which we have ever observed. On the left side, particularly, a very remarkable depression, equal to the points of two fingers, exists. Facts like these are so striking that he who runs may read; and they are valuable, as depriving prejudice and indolence of every excuse for neglecting inquiry.—EDITOR.

ESSAY ON THE QUESTION,—DOES PHRENOLOGY AFFORD A SATISFACTORY EXPLANATION OF THE MORAL AND INTELLECTUAL FACULTIES OF MAN ?*

Mr PRESIDENT,

A late writer in the Edinburgh Review, in speaking of the mode of inquiry which appeared to him best calculated to advance the progress of mental philosophy, observes, that "speculations regarding the *nature* of mind seem now to be universally abandoned as endless and unprofitable;"† for we have at last practically discovered, that the investigation of mind detached from matter is wholly without the sphere of our faculties. This is one great step in the acquisition of knowledge; but there is yet another and a greater, which, although a direct consequence of the former, seems to have been long overlooked, and is even now

* By Andrew Combe, M. D.—Vol. i. No. 3, p. 337.—Read to the Medical Society of Edinburgh, November 21. 1823, and published by permission of the Society.

The author begs leave to state, that the following Essay was written solely in obedience to a law of the Medical Society, which obliges each member, in his turn, to write a Dissertation for discussion on a subject selected by a committee appointed for the purpose, and not with the slightest view to publication. He has, therefore, made a few verbal alterations, but no change of matter or ideas.

† No. xlviii. p. 439.

scarcely attended to, namely, the necessity this lays us under of studying the human mind as it exists in nature, united with and influenced by its material organ. To the neglect of this important consequence, the slow progress of the philosophy of mind is mainly to be attributed.

This oversight is the more astonishing, that it has been so clearly perceived and pointed out by the very persons who have committed it. For while, among other metaphysicians, Mr Stewart himself explicitly states,* "That among the difficult articles connected with the natural history of the human species, the laws of union betwixt the mind and body, and the mutual influence they have on one another, is one of the *most important inquiries* that ever engaged the attention of mankind, and almost equally necessary in the *sciences of morals and of medicine*;" yet, by some strange fatality, he, as well as the rest, uniformly proceeds, in the face of this admission, to investigate the laws which regulate the operations of the mind with as little regard to the influence of the organization as if it had no actual existence. Laying aside the legitimate object of inquiry, so clearly laid down by themselves, these philosophers tell us elsewhere, "that the objects of metaphysical speculation are the immaterial properties of an immaterial being;"† and aware, as they are, that our senses and powers of observation are totally inadequate to the perception of "immaterial properties of immaterial beings;" they have recourse to a mode of investigation, in contradistinction to the ordinary one by observation, which they conceive to be more efficient, namely, reflection upon consciousness. "As all our knowledge of the *material* world," says Mr Stewart, "rests ultimately on facts ascertained by *observation*, so all our knowledge of the *human mind* rests ultimately on facts for which we have the evidence of consciousness."‡ And, in his Essay,§ he says, "I have accordingly, in my own inquiries, aimed at nothing more than to ascertain, in the first place, the laws of our constitution, AS FAR AS THEY CAN BE DISCOVERED BY ATTENTION TO THE SUBJECTS OF OUR CONSCIOUSNESS, and *afterwards to apply*

* Stewart's Preliminary Dissertation, part ii. pp. 199, 200.
† Edinburgh Review, No. lxviii. p. 391.
‡ Outlines of Moral Philosophy. § P. 2.

these laws as principles, for the synthetical explanation of the more complicated phenomena of the understanding."

From these quotations no one could have the smallest doubt of the adequacy of consciousness to afford us that information " concerning the laws of union and the mutual " influence of mind and body," which Mr S. justly declares to be so necessary in the sciences of morals and medicine. —What, then, must be our astonishment on finding, that, so far from consciousness throwing any light upon the connection between different states of the mind and different conditions of the material organ, it does not inform us even of the existence of the latter ? This fact, however, furnishes a very simple and satisfactory explanation of the cause of the constant failure which has ever attended the efforts of the most profound and ingenious men, whose talents and industry have been expended during so many ages in the barren fields of metaphysical research; and it explains perfectly the superior success which has attended the labours of Gall and Spurzheim, conducted as they were with the most scrupulous and constant reference to the effects of the material organ. It was a deep conviction of the necessity of always keeping in view the influence of the organization, that induced Dr Gall to devote so much time and attention to the observation of the effects of different forms and conditions of the brain upon the power of manifesting individual mental faculties ; and it was the extensive application to nature of this better mode of investigation, that ultimately enabled him to establish the following principles, the most important of those upon which the new system is founded :—

1. That the mind is endowed with a plurality of innate faculties.

2. That each of these faculties manifests itself through the medium of an appropriate organ, of which organs the brain is a *congeries*.

3. That the power of manifesting each faculty bears a constant and uniform relation, *cæteris paribus*, to the size of the organ, or part of the brain with which it is more immediately connected.

4. That it is possible to ascertain the relative size of these different organs during life, by observing the different forms of the skull to which the brain gives its shape.

Hence, if these principles are correct, by adopting the

mode of inquiry to which they naturally give rise—by comparing development of brain with manifestation of mind—it becomes possible to discover the nature and number of the primitive faculties, with a degree of certainty absolutely unattainable by any other method. For, besides avoiding the great error of neglecting the influence of the organization, we also avoid another equally great, into which the metaphysical philosophers have fallen in prosecuting their inquiries by reflection on consciousness alone. It is that of each taking his own mind as the standard or type of those of the human race, and thus regularly beginning the erection of his own theory by the demolition of that of his predecessor; because, on account of the natural and undeniable differences between the minds of different individuals, consciousness does not and cannot present the same results on the presentment of the same object to any two of them; and much less can the consciousness of any one individual agree with that of all others at one or at different times; which it must necessarily be shewn to do, before laws or principles, applicable to all, can be deduced from the consciousness of *one*. Phrenology, on the other hand, explicitly lays down these differences in disposition and talents as natural; and one of its chief objects is to ascertain, by observation, the causes upon which they depend.

Some have been led to deny the truth of the observations of the phrenologists, because the results at which they have arrived often differ so widely from the opinions entertained by the most esteemed metaphysical writers, whom they have been accustomed to revere as the only legitimate authorities in the science of mind. But he who contemplates for a moment the fundamental difference of the two modes of inquiry, will pause before rejecting the phrenological doctrines on that ground alone, and will feel any thing rather than surprise at a considerable difference of result. Phrenology is a science of observation, and its principles are a direct inference from facts in nature, while those of the metaphysicians are derived solely or chiefly from reflection in the closet. No wonder, then, that the phrenological mode of investigation should have led to the discovery of much that must have remained unknown to the metaphysician. It is like a new agent in chemistry, or a new power in mechanics, the results of which can be ascertained by experience

alone, and not by deductions from the analogies of things essentially different.

It is so far fortunate for the new system, that, to disprove a science founded on observation, it is not sufficient merely to deny its truth; we must commence our operations on the facts upon which it is built, and, by confirming or undermining these, support or undermine the superstructure. This mode of proceeding ought *invariably* to be followed as the only one which is either philosophical or conclusive; and it is that which I would adopt on the present occasion, if it were in my power to do so. Unfortunately, however, in as far as Phrenology is concerned, it can be followed only in the wide and varied field of nature, and not within the limits of a hall like this. I might, no doubt, go over a long detail of facts observed in that field by myself and others; but to the minds of those who are not *practically* acquainted with the principles of Phrenology, so many sources of fallacy immediately present themselves, and so much calm reflection is, at first, required to perceive the relation of the facts to the principles, that such a detail would be tedious and uninteresting, and would probably seem inconclusive. The committee who selected this question for discussion seem to have been aware of this. They do not ask if Phrenology is founded on fact; because the affirmative or negative can be proved only by repeating the observations and verifying the facts themselves. But they very justly suppose, that if it has a foundation in nature, its doctrines must be consistent with, and explanatory of, the known phenomena of mind. They, therefore, ask simply if Phrenology affords a satisfactory explanation of these phenomena, trusting to the consistency or inconsistency which shall be shewn to exist between them for the strongest presumptive evidence of its truth or erroneousness which it is possible to obtain. To the examination of this kind of evidence, therefore, I shall strictly confine myself, and the order which I shall adopt is as follows:—

Taking for granted, what almost nobody now thinks of denying (and which those who do will find demonstrated in Mr M'Farlane's excellent paper, read to this Society about two years ago), that the brain is the organ of the mind, I shall endeavour to shew that all the mental phenomena are ex-

plicable by, or consistent with, the fundamental phrenological principles already mentioned as established by Dr Gall; while they are at variance with every theory which regards the organ of the mind as single, or the mind itself as a single power existing in different states. And, to prove that the individual faculties admitted as ascertained are really necessary and original powers, I shall give a few examples of their application to the analysis of the moral and intellectual nature of man, as exhibited in the varied characters of individuals and of nations. I shall dwell most upon the proof of the principles, because they lie at the root of the whole science, and, if once admitted and acted upon, will soon lead to the demonstration of what are primitive faculties and what are not.

In endeavouring to shew that the mental phenomena are explicable by the principle of a plurality of faculties and organs, I shall begin with the consideration of the intellectual, and then proceed to that of the moral nature of man.

The first order of intellectual phenomena, for the explanation of which the admission of the principle is necessary, is that of the successive development of the different powers of the mind in infancy and youth. At birth, the infant mind seems nearly insensible to surrounding objects. The powers of observation are then gradually developed, and existence is recognised long before ideas are formed of all the qualities of objects. The powers of perceiving colour and form, and also the relative position of objects, are developed while yet there is no idea of distance, size, or weight; and an object is thus grasped at when far beyond the reach of the infant. The faculty which, by comparing objects with each other, enables us to perceive resemblances, then comes into play, but long before that which leads us to attend to the distinguishing differences; so that one thing is often confounded with another to which it bears a very slight resemblance. It is only about the age of puberty that the reasoning power is possessed in much activity, and it is not till adult age that it arrives at maturity.

That this is the general order of the development of the mental powers, is proved by the progress of language, which is known to take its character from the nature of the predominant faculties of those by whom it is used. At first,

it is merely a collection of nouns, of words denoting existence and nothing more, as man, horse, tree. To these are soon added words expressive of qualities, and those expressive of colour and form are generally understood, and *used with intelligence*, before those of size, distance, or weight; those expressive of resemblance precede those of differences; and those of individuals, those of abstracts or classes.

The same rule of successive development is observed to hold with regard to the moral sentiments and propensities, although it is more difficult to trace the order of their appearance. A single instance, however, is sufficient to prove the fact; and, as that is all we want at present, I shall merely mention it. It is that of the late development of the sexual propensity, which, however strong it may become in after life, is rarely perceptible before the age of puberty, and bears no constant relation to any other quality of mind at any period of our lives.

The fact of the successive development of the different faculties of the mind is indeed admitted by all philosophers. But if we try to explain it, as is generally done, by the supposition of gradual improvement or some general change in the constitution of the *whole* brain, as the single organ of mind, we meet with nothing but contradiction. The organ of mind, being single, and serving for the manifestation of all the faculties, ought, on this supposition, to be equally fit for the operation of all at the same time, which we have seen it not to be. If we admit the phrenological principle, however, nothing can be more simple, or true to nature, than the explanation we then have. According to this principle, each mental faculty, like each of the five senses, will depend, for the power of manifesting itself, upon the healthy condition of a particular organ. So that, just as the power of vision is, *cæteris paribus*, always proportioned to the perfection of the eye, or organ of vision, the energy of each mental faculty may be proportioned to the state of its own organ; and as, from the sense of sight being exercised by an appropriate organ, we sometimes find it sooner and more perfectly developed than that of hearing or of smell, in like manner we can easily conceive how the faculty of Individuality, which disposes to observation, may, from having also an appropriate organ, be sooner and more

perfectly developed than that of Causality, or of Tune, or of Number, or more in one person than in another. Indeed, the moment we admit the plurality of mental faculties and organs, the explanation of the early or late, successive or simultaneous, perfect or imperfect development of one, of several, or of all the mental powers, becomes so simple and easy as to present itself to the mind of every inquirer.

In proof of the *fact* of the later development of some portions of the brain than of others, I have only to state what is well known to anatomists,—1*st*, That, in infancy the cerebellum bears a much smaller proportion to the rest of the cerebral mass than it does in after life; in the former, being only about one-fifteenth, and in the latter, one-sixth or one-eighth—which corresponds precisely with the function ascribed to it, of being the organ of the amative propensity; and, 2*d*, That, in infancy and youth, the middle and central parts of the forehead are generally so much more prominent than the upper lateral parts, as to give a kind of roundness, compared to the square appearance which it afterwards assumes, upon the farther development of those portions of the anterior lobes of the brain which form the organs of the reasoning powers. In relation to this fact, it may be worth while to add, that the parts first developed are known to be the organs of Individuality and Eventuality, which are said to observe and to know; while the latter are those of Causality, or reflection;—thus in strict accordance with nature.

The differences in the mental constitution of the two sexes are also inexplicable on other than phrenological principles. It is admitted, that the female generally differs from the male in character, dispositions, and talents. In their earlier years, the boy and girl can scarcely be distinguished, except by their dress; but a difference gradually shews itself, while yet external circumstances remain the same, and proceeds till the distinctive character of each is broadly marked. That this is the course of nature, and not of art, is manifest from the change happening while circumstances are unaltered—from its occurring at an earlier or later period in different individuals similarly situated—and from some individuals of one sex retaining through life most of the mental qualities of the other. If we attempt to

explain the difference by the supposition of some original difference in the animating principle, uninfluenced by the organization, we are refuted by the occasional occurrence of females possessing all the mental attributes of the male, and, *vice versa*, males with all the mental qualities of the female. But the moment we admit the phrenological principle of plurality of organs and faculties, the difficulty vanishes. We have only to suppose, that the parts of the brain which constitute the organs of the love of young, of attachment, and of the other faculties which predominate in the female mind, by some mysterious law of nature become more fully developed relatively to the others in the female than in the male brain; and the natural result will be a greater degree of strength of these faculties. The female intellect is like that of youth, more remarkable for acuteness, readiness, and extent of memory, and a perception of qualities and resemblances, than for depth of reflection or solidity of judgment. The female forehead, therefore, if this explanation be the true one, should, more than that of the male, resemble the youthful brow; and a moment's reflection will satisfy every one that, in point of fact, it does resemble it; and the proof is, that that very roundness and sloping away of the upper lateral parts has always been regarded as a point of beauty in the female forehead.

Another order of intellectual phenomena—those of *genius*—are of themselves sufficient to prove the plurality of mental faculties and organs; for genius, in almost every instance, is partial, or limited to the possession of one or a few strong faculties only, which it could not be if the organ of mind were single. Thus, an individual may now and then be met with, who possesses much genius for poetry, for music, for reasoning, for mechanics, or the fine arts; but we very rarely meet with one who is able to excel in all or in several of these at the same time, however anxious he may be to do so, and whatever efforts he may make. We are told, indeed, by some authors, such as Mr Stewart, that "a genius for poetry, for painting, for music, or for mathematics," is "gradually formed by particular habits of study or of business;"* and that "invention in the arts and sciences is the result of acquired habits, aided by favourable

* Moral Philosophy, p. 16.

circumstances, and not the original gift of nature."* But if we consult a yet higher authority than Mr Stewart, namely, Nature herself, we find these opinions contradicted by facts: for genius most frequently appears at such an early age as to put habits of study or cultivation as a producing cause entirely out of the question. We are told, for instance, that at three years of age Mozart's great amusement was in finding out concords on the piano; that nothing could equal his delight at discovering an harmonious interval; and that, before six, he had invented several pieces of some extent and intricacy. We are also informed, that Haydn distinguished himself before the age of twelve; that Handel, before the age of fourteen, produced an opera which had a run of thirty successive nights; and that, so far from his habits of study being the result of great cultivation, they were formed in the retirement of a garret, and in spite of every species of discouragement. Miss Paton, too, who in her late visit to Edinburgh afforded so much delight, was remarkable as a performer at the age of eight.†

Among the poets again, the same early appearance of genius occurs where cultivation could not possibly have had time to operate. Dr Johnson, in his Lives of the Poets, tells us, that Cowley, Milton, and Pope "might be said to lisp in numbers," "and to have given such early proofs not only of powers of language, but of comprehension of things, as to more tardy minds seem scarcely credible." Cowley, for instance, wrote a tragedy in his tenth year. Miss Clara Fisher, also, in her seventh year manifested amazing powers of comprehension and of dramatic talent; and yet so little were her parents aware of any laborious studies on her part, that they simply affirm, that these talents appeared all at once after seeing a play. Mr George Bidder, when still a child, manifested his prodigious calculating powers, and invented rules for himself which his teachers could never discover, and which, consequently, he could not have derived from them. Again, turning our attention to invention in the arts and sciences, which we are told is *not a gift of nature*, but the *result of acquired habits, aided by favourable circumstances*, equally contradictory instan-

* Stewart's Elements, 1st vol. 50th ch. part 1, sect. 4.
† Edinburgh Review, No. lxvi. May 1820, p. 380.

ces occur. Dupin, for example, speaks of two brothers, journeymen bakers, whom he saw in Glasgow—" deux frères boulangers, qui, dans l'intervalle d'une cuisson à l'autre, s'occupent à faire des machines et des instruments de physique. Ils ont coulé, tourné, ajusté toutes les pièces d'une petite machine à vapeur, dont la modeste bouilloire chauffe à côté du four aux petits pâtés. Elle sert à faire aller un tour en l'air, à l'aide duquel nos deux artistes tournent les métaux et façonnent des lentilles pour des instruments d'optique. Ils ont construit un petit appareil pour eclairer par le gaz leurs boutiques et leurs appartements, &c. &c."* One would expect, that in such a case, if Mr Stewart's theory be true, the combination of circumstances must have been very favourable indeed to produce such an effect on men of a profession which is universally considered as any thing but intellectual. Monsieur Dupin, however, in expressing a hope that " they will one day quit their profession to cultivate with success the natural sciences," adds, " Mais leur fortune dèpend d'un oncle qui *préfere de beaucoup la boulangerie et la pâtisserie à la gazometrie et à l'astronomie*, et qui, jaloux du titre héréditaire de sa famille, veut transmettre à ses arrière-neveux le pétrin de ses ancêtres." And so little is he satisfied with the uncle's mode of encouraging science, and of forming habits of study, that he immediately exclaims—" Hélas! combien d'hommes sont parmi nous, sans s'en douter, l'oncle des deux patissiers!" And that there are men who have even a still more oblique perception of what constitutes " favourable circumstances," I shall presently shew.

During my residence in Paris, I had the pleasure of knowing intimately a man remarkable for " his powers of invention in music and in mechanics," and who had raised himself to riches by the exercise of these powers. I was at that time studying phrenology, and looking about for information. I therefore eagerly embraced the opportunity of asking him, whose house was filled with the results of his own inventions, by what habits of study he had formed his genius, and what " favourable circumstances" had aided him in his career of excellence. He gratified my curiosity, and gave me the history of his life, which seemed, however, to prove that in this case, as in the

* Memoires sur la Marine, p. 69.

others, his genius had formed his habits, instead of his habits forming his genius. Instead of being encouraged to follow those occupations in which he was ultimately so successful, he pursued them in the face of opposition from his relatives, so violent as to make him leave his father's house.* He was never happy when not exercising his inventive powers; and many a time have I heard him regret the want of education in his youth, as he was thus left to waste much of his time and talents in *discovering* the first principles of a science, which a few weeks' study would have taught him. To the uninitiated, it is difficult to conceive in what the favourable circumstances of this gentleman's life consisted, if not in Nature herself having bestowed upon him energies calculated to rise superior to every species of repression and discouragement. If indeed any one could acquire a genius for poetry, for music, or for any thing else, by forming any habits of study, or by any sort of training, then we need not go to phrenology for an explanation of the phenomena of genius. But as the fact is notoriously the reverse, let us see if the new system reveals any conditions which are not under our control, and which limit the power of forming habits or of acquiring a genius for any pursuit.

From such observations as the preceding, the phrenologists contend, that genius is the gift of nature, and not the result of even the most favourable combination of external circumstances; and that it is in general partial, or limited to one or several only of the mental faculties. Experience shews also, that a certain condition of the brain or organ of mind is somehow or other necessary for its manifestations; for, besides the occasional appearance of genius during disease, where none was possessed before, we uniformly see the power of manifesting the faculties vary with every change in the state of their material organs, and reach their greatest degree of vigour when the brain arrives at its full growth. We see them constantly disturbed by its injuries, and varying with its changes; from which, and from innumerable other observations demonstrative of the fact, the phrenologists affirm, that genius is always accompanied by a certain condition of the brain, without which condition it cannot possibly appear. They farther contend, that

* See his history, p. 276 of this volume.

the phenomena are not reconcileable with the idea of the brain, or any other part, *as a whole*, being the single organ of mind, as it is generally stated to be when referred to by the metaphysicians. For if the organ of mind were single, genius ought ALWAYS to be general, and a man should be equally great in every department, or at least should have equal power of becoming great in every department—or, to use Mr Stewart's words, "of forming any habits he chooses, if aided by favourable circumstances,"—since the single organ ought to be equally fitted for manifesting one faculty as another. In some instances, indeed, such as the Admirable Crichton, Michael Angelo, and a few more, genius seems to be general. But the puzzling question for the metaphysician comes to be, *Why is it not so in every instance?* To the phrenologist, the explanation of both cases is extremely easy; for in general genius, he finds the organs of *all* the intellectual faculties largely developed, whereas in partial, one or a few only are extremely large. In the portraits of the Admirable Crichton, this is strikingly displayed; and in an excellent bust of Michael Angelo, which I have seen in the church of the Santa Croce at Florence, the same extraordinary development of all the intellectual organs is extremely remarkable. With regard to partial genius,—on the principle of the different mental powers being connected with and depending for their manifestations upon different cerebral parts, we can easily conceive how these may be differently proportioned to each other, not only in different individuals, but in the same individual at different periods of his life; or how one man may have a natural power or facility of forming habits of a certain kind, which is denied to another, while he may be excelled in his turn with respect to the power of forming habits of a different kind. In such cases as those of Mozart, Handel, and Haydn, the cerebral organs upon the size of which a great endowment of the faculties of Tune, Time, and Ideality depend, may on this principle be easily conceived to have existed without bearing any necessary relation to the degree of endowment of the other faculties. In Pope, Milton, and Cowley, the cerebral organs, with which the faculties of Ideality, Language, &c., are connected, might easily have existed in large development, al-

though those of Tune, of Constructiveness, or of Number, might be possessed in a much smaller degree. In Addison, who disliked music, the organ of Tune might thus be very small, although that of Ideality was large. And in my Parisian friend, the organs of Constructiveness, Tune, Number, and Causality might be, and I can say from observation *were*, largely possessed, although those of Language or of Colouring were small. The same must have been the case with the bakers; and each might thus easily be able to form habits which the others could not have formed under any circumstances.

On the same principle, the peculiarities of genius are easily explicable. No two persons, for example, write poetry, compose music, or paint or draw, precisely in the same style. Thomson, Cowper, and Byron, are all of them poets, but they all differ from each other. Ideality is essential for a poet, Tune and Time for a musician; but according to the combination of these with other faculties, will be the character of the production. Much Ideality, with a full development of Adhesiveness, Benevolence, Hope, Conscientiousness, Veneration, and Cautiousness, produce the poetry of a Cowper. A large endowment of Tune, with the same combination, produces sweet, soft, and plaintive notes, which melt the soul. The same Tune or Ideality, combined with much Destructiveness, Combativeness, Self-Esteem, and Firmness, will produce warlike music or poetry. It is thus an easy matter for the phrenologist, after ascertaining the relative development of the organs of the different faculties of an author, to tell the general character of his productions, or, after reading the latter, to infer what are the predominant faculties in the mind of the author. An instance of this kind will be found in the New Edinburgh Review, in a phrenological critique of Tennant's poetry.

Having now shewn that the phenomena of intellect admit of an easy explanation on phrenological principles, I proceed to the differences observable in the moral dispositions of individuals, which also are the result of their natural constitution, as they are perceptible from their earliest years, and often continue through life, unchanged under every variety of circumstances. On the one side we see

many whose moral principles it seems almost impossible to contaminate, and who have grown up unspotted in the midst of temptations and of bad example. On the other there are too many whose every motion was watched, and who received the most complete moral training which it is possible for man to bestow, and who, notwithstanding, manifested a ferocity and baseness of character which it is painful to contemplate. These qualities cannot be said to be in any degree proportioned to the power of intellect which the individual possesses; for "we find," says that accurate observer, Dr Rush,* "the moral feeling in a state of vigour in persons in whom reason and taste exist in a weak or in an uncultivated state. I once saw a man," he adds, "who discovered no one mark of reason, who possessed the moral sense or faculty in so high a degree, that he spent his whole life in acts of beneficence. He was not only inoffensive (which is not always the case), but he was kind and affectionate to every body. He took great delight in public worship, and spent several hours a day in devotion." Similar instances are so frequently met with, that no one can deny their truth.

The explanation of these phenomena, which have puzzled philosophers in every age, is easily found in Phrenology. On its principles, the cruelty manifested by the Count Charolois, by Louis XI., and by the Neros and Caligulas of more modern times, is naturally referable to an excessive and uncontrolled activity of the organs of the animal propensities, which, in these instances, may easily be conceived to have been very large in proportion to those of the moral or restraining powers, under the control of which Nature had destined them to act. The moral faculties may thus be present with every degree of intellect. They may be powerful where the intellect is weak or where it is strong, just as the sense of sight may be acute when taste and hearing are either also acute or altogether gone. Let us take, for instance, the two opposite historical characters of Louis XI. and Henry IV. of France. Both possessed a large endowment of intellectual power; but how different in their moral nature! In Louis the intellect was made subservient to the gratification of power-

* Medical Inquiries, vol. ii.

ful faculties of Destructiveness, Secretiveness, Acquisitiveness, and Self-Esteem, uncontrolled by justice or benevolence. In Henry, again, it was guided by strong faculties of Attachment, Benevolence, and Love of Approbation, unbiassed by the dark workings of Secretiveness, selfishness, and cruelty. The one was abhorred and detested, the other loved and admired. The proof of this explanation being the true one, is the fact of similar characters being met with in private life, whose sentiments, propensities, and intellect, are analogous, and produce corresponding effects, but on a scale proportioned to their rank and power, and the progress of civilization. On the same principle, the moral and devotional tendencies of the idiot mentioned by Dr Rush are easily accounted for.

The phenomena of dreaming and of somnambulism are also equally embarrassing for the metaphysicians, and equally consistent with Phrenology. Indeed, the unprejudiced mind can scarcely ask a more convincing proof, than that afforded by the phenomena of dreaming, of the existence of a plurality of mental faculties and organs. During that state several of the mental faculties, moral and affective, as well as intellectual, are evidently active, while the remainder continue dormant; just as we sometimes retain the sense of hearing awake when sight and smell no longer transmit ordinary impressions. This must be admitted—because if *all* our mental powers are awake, there can be no sleep; and if they are all dormant there can be no dream. And if some can be awake when others are dormant they must of necessity have different organs. The natural result of such an arrangement is, that we sometimes imagine ourselves engaged in actions, which, in our waking moments, we should never have undertaken, because, in the latter state, our decision would have been influenced by feelings or faculties now dormant. Thus, a person with a large and active endowment of Combativeness, but in whose waking hours it is regulated and kept in check by the higher sentiments and intellect, may, when these are inactive during sleep, frequently dream of being engaged in broils and battles. The restraining powers being dormant, and the propensity active, it takes its full swing. It happens occasionally, and in a similar way, that a person whose reasoning powers are naturally very great,

will dream of philosophy and serious reflection, as is recorded of Condillac and Franklin, and that reflection then going on undisturbed by other emotions or states of the mind will produce better ideas than they could have invented when awake.

The phenomena of somnambulism admit of a similar explanation, as it is merely a variety of dreaming, in which one or more of the external senses are in simultaneous activity with some of the internal faculties, and in which the power of voluntary motion is possessed.

After having thus exposed the consistency and harmony which obtains between the principles of Phrenology and the *sound* phenomena of mind, we ought next to try their consistency with those of the diseased state, as the true theory of mind must *always* be consistent with nature. It has ever been a grievous defect in the theories drawn from the closets of the speculative philosophers, that not one of them was ever applicable to actual life, and that any attempt to reconcile their opinions with diseased phenomena of mind instantly laid their systems in the dust.* It is the peculiar excellence of Phrenology that its doctrines have been drawn, not from the consciousness of individuals, erected into standards of the race, but from observations made upon the minds of thousands and of tens of thousands, and that they not only are found consistent in all their parts and in all their applications, but explain simply many of what were formerly considered the most intricate phenomena in the philosophy of mind. I regret, therefore, that want of time prevents me from entering minutely upon this point, and forces me to confine myself to a very general outline.

In partial idiocy, for instance, the individual is exceedingly deficient in most of the intellectual powers, and frequently in some of the moral sentiments, and yet possesses a few of them in considerable vigour. Thus an idiot may have a talent for imitation, for drawing, or for music, and be incapable of comprehending a single abstract idea; or

* Hill, the well-known writer on insanity, seems to be impressed with the same idea, when he says, at page 29, that "the Scotch philosophers, who may hereafter wish to detect the fallacy of some of the *most important tenets* contained in their creed, must explore with unprejudiced zeal the history of the diseases of man, which are productive of Dementia."

he may manifest the sentiments of Veneration, or of Benevolence, or the feeling of Destructiveness or Amativeness, and yet possess no other power of intellect or of feeling in a perceptible degree. And in the state of partial insanity, the very name equally implies derangement of a limited number of faculties, while others remain sound. Thus, in melancholy, the whole intellectual powers seem sometimes to remain unimpaired, while sentiments only are diseased. Neither of these states could occur did all the faculties of the mind manifest themselves through the medium of a single organ, as is generally supposed. Even dissections, vague as they must yet be considered in reference to insanity and to Phrenology, confirm the truth of the fundamental principles of the latter; for Morgagni * tells us, that there is no more striking characteristic of the brains of the insane than that of the variety of the states of their different parts; some being soft while others are hard, some of one appearance and some of another: and, when we recollect that madness is generally partial, this will be admitted to correspond in a remarkable degree with what a phrenologist would expect *a priori*. If the organ of mind were single, partial madness—madness limited to certain faculties only—would evidently be impossible, unless we admit of disease of the immaterial principle. On that supposition each faculty ought to be affected to an equal degree, and insanity could have no permanent or fixed character.

Having now shewn that the phrenological principle of a plurality of faculties and organs is indispensably necessary to explain the phenomena of either sound or diseased mind, I come next to inquire, whether the phrenological mode of investigation, namely, that of comparing development with manifestations, seems to be founded in reason, and to be adequate to the attainment of the end in view.

Philosophers of every creed now so generally admit the existence of *natural* differences in the talents and dispositions of individuals, that I shall, on the present occasion, and after what I have already said, take it for granted. These differences can depend only on one of two causes: Either, 1*st*, they are inherent in the nature of the immaterial principle; or, 2*d*, they are caused by corresponding differences in the condition of the brain, as the organ of mind.

* *De Sedibus et Causis Morborum.*

Now, although we are entirely ignorant of what the immaterial principle or mind is in itself, yet we have many weighty reasons for not believing the differences to be so inherent in its nature as to be uninfluenced by the organization. The chief of these, as mentioned in the beginning of this paper, are the successive development of the faculties corresponding to that of the brain, and the great changes produced by disease. As the immaterial principle is held to be unsusceptible of change, and as these phenomena can be simply accounted for by the changes in the state of the brain, which we observe to accompany the changes in the constitution of the mind, it seems much more philosophical to satisfy ourselves with an explanation which comes within the cognizance of our faculties, than to have recourse to one entirely hypothetical and incapable of proof; more especially, when the former accords strictly with facts which daily and hourly present themselves to our notice.

Admitting the principle then, that each primitive mental faculty manifests itself by means of an appropriate and distinct cerebral organ, and that the energy and activity of its manifestations vary with the changes in the condition of the material organ, we have next to inquire, to what organic cause the natural facility which we possess of manifesting one faculty, or set of faculties, more powerfully than another is to be attributed? Even reasoning *a priori*, we can see no other than that of size. General size of the brain, it must be observed, is distinctly recognised by the physiologist as an indispensable requisite for sound and vigorous manifestations, and the degree of general power is admitted to vary with the degree of size, from the small brain of the idiot up to the large brain of a Bacon or a Shakspeare. Now what applies to the brain as a whole must be equally true in regard to its parts. If we suppose each organ, or part of the brain, to be equal in activity and equal in perfection of structure, it is difficult to see how there can be any natural inequality of function, or any possibility of manifesting one faculty more powerfully than another. But let us suppose one organ to be of greater size than the other, and all the other things to be equal, we see at once, on the principle above stated, a possibility of its performing its functions with more energy.

To this it may, perhaps, be objected, that *a faculty is*

sometimes very vigorously manifested during disease, although the size of its organ has undergone no change. This is perfectly true; but it is no less true, that if an organ of a larger size be subjected to the same degree of morbid excitement, its functions will be performed with still more energy. An important condition is changed. A small muscle, for instance, suffering from diseased excitement, will often operate more powerfully than a larger muscle in its healthy state; but no one doubts that, upon exciting the latter to the same pitch, it will operate with a greater degree of power exactly proportioned to its greater size; so that it may be safely admitted as a truth, that, *cæteris paribus*, the larger organ will always produce the greater result. Hence, the principle of size exerting an influence upon the energy of the mental manifestations is perfectly consonant to all the known laws of nature, and is no new and idle proposition started to serve a particular purpose.*

* This principle, I am perfectly aware, is ridiculed by many as too absurd to be entertained for a moment, and various authors are quoted to prove it to be so. For the sake of such persons I beg leave to subjoin a passage from a Report, by the celebrated Cuvier, to the French Institute, in 1822. Speaking of the cerebral lobes being the place "where all the sensations take a distinct form, and leave durable impressions," he adds, "l'anatomie comparée en offre une autre confirmation dans *la proportion constante du volume de ces lobes avec le degré d'intelligence des animaux;*"—thus admitting as distinctly as Dr Gall himself, the influence of *size* of the cerebral organs upon the power of manifesting the mental faculties. And it must farther be remarked, that Cuvier here speaks the sentiments of *Portal*, *Berthollet*, *Pinel*, and *Dumeril*, who, along with himself, formed a commission to examine and report upon the experiments of Monsieur Flourens. This statement, however, taken in detail, is not sufficiently precise, for, in point of fact, the degree of intelligence is not in relation to the size of the *whole* hemispheres, but only to that of their anterior lobes; when I quote it, therefore, in support of the *principle*, it is not because it makes the fact either clearer or stronger to those who have observed for themselves, but because it has been much the fashion to refer to and hold up the *opinions* of eminent men against Phrenology, even although they had not studied it, as deserving of far more weight than the *observations or facts* of those who had; and because many are willing to yield to authority, in order to save themselves the trouble of consulting nature. Had this testimony of Cuvier and his learned associates, however, been merely an opinion, I would not have brought it forward; but, as it contains the unbiassed expression of fact, the result of immense observation under the most favourable circumstances, I do think it merits attention. In his Comparative Anatomy also, the same author distinctly states the size of the nerves to be an indication of the energy of their function; and, if this were the place, it would not be difficult to shew that, to be consistent with himself, he must be a phrenologist in principle.

Assuming, then, that the mind manifests each faculty by means of an appropriate organ, and that the varieties in the power of manifesting the different faculties observable in the same individual, may, even reasoning *a priori*, be philosophically explained by a difference in size; if the phrenologists can shew, that it is possible during life to determine the relative size of the different organs or parts of the brain, we can no longer with a shadow of reason call in question the truth of their premises, and the importance of their mode of investigation as compared with those hitherto in use. The possibility of doing so is easily proved.

Nobody now thinks of denying that it is the brain which gives the form to the skull; and any one may easily satisfy himself how easy it is to distinguish, through the integuments, the shape of every part of the skull except the internal parts of the base, of which, during life, the phrenologists do not pretend to know any thing. So that, if the brain gives the form to the skull, and we are able to ascertain during life what that form is, we must at once admit the possibility of solving the question. The want of entire and absolute parallelism of the two tables of the skull, has sometimes been proposed as an insuperable objection to this mode of proceeding; but even admitting that it does sometimes occur, when we know that, while the whole thickness of a skull seldom exceeds from one to three lines, the differences in the development of brain extend to *inches*, this objection falls to the ground. Besides, these inequalities are confined to mere points, and seldom extend to the whole surface of an organ. But this has been so clearly demonstrated in the elementary works on Phrenology, and is so generally assented to, that it would be a mere waste of time to say a word more about it.

Having now adverted to the three essential points—1*st*, the plurality of mental faculties and organs; 2*d*, the influence of size upon the power of manifesting the faculties; and, 3*d*, the possibility of ascertaining during life the relative size of the different organs—and shewn that it is absolutely necessary to admit these principles in order to reconcile the phenomena with the ordinary laws of nature—it follows as a necessary consequence, that if the discovery of the primitive powers of the mind is ever to be attained by man, it must be by the application to nature of the

mode of investigation discovered by Dr Gall; and that the only way to ascertain whether the phrenologists are correct in receiving such and such faculties as primitive and established, is to examine nature, and to verify or refute the facts upon which the phrenological doctrines stand. But, as already mentioned, this can be done only in the great field of nature. All that we can do *here*, is to offer presumptive evidence of their truth, by shewing how far they go to explain the varieties of moral and intellectual character of individuals and of nations. If they seem to explain these satisfactorily, they may then be regarded as resting upon the basis of truth, and to have at least this one great advantage over other systems of the philosophy of mind, none of which throws any light upon this interesting subject. In proceeding to try the primitive phrenological faculties by this standard, we must however never forget, that it is by *observation alone* that their actual existence must ultimately stand or fall.

As an example of the application of Phrenology to the analysis of character, I shall select a few sketches from the Life of Dr Samuel Johnson, prefixed to the 12mo edition of his works, published at Edinburgh in 1806.

That commanding energy and force which pervaded every part of his character in such a remarkable degree, and which impressed themselves so strongly on inferior minds, are now known to phrenologists to be accompaniments of a very large brain only, almost every part of which must have in his instance been largely developed. Power indeed is one of the most remarkable qualities of his mind. His biographer says, "One of the most striking peculiarities in his character was a tendency towards melancholy." By him the Creator was "feared as an awful judge," and "not contemplated as the beneficent Author of a system of improvement and felicity;" and "death was ever present to his mind." We are told also, "that he adhered through life to his early religion of the nursery, from a want of sufficient intellectual intrepidity to investigate any part of it by the force of his own understanding; and that he could never witness the slightest symptom of religious incredulity without being filled with 'rage and horror.'" His biographer very justly observes, "that these distempered symptoms could not have exhibited themselves in a man whose belief was founded upon conviction result-

ing from the investigation of evidence." Had he been a phrenologist, he would have added, that these feelings arose from large Cautiousness, Veneration, and Wonder.

Upon consulting any of the works on Phrenology, Mr Combe's Essays, for instance,* we find it stated, that "the internal and involuntary activity of the faculty of Cautiousness in those in whom it is too powerful, produces emotions of dread and apprehension, without an adequate external cause, and which are often exceedingly distressing to the individual." Dr Spurzheim says, that "when very powerful, it produces doubts, hesitation, uneasiness, melancholy, and hypochondria."

The sentiment of Veneration, which I have stated as strongly manifested, is said, in the works on Phrenology, "to predispose to religious feeling; but not to judge what ought to be venerated." "It gives the feeling of respect," says Dr Spurzheim, "and leads us to look upon some things as sacred; it venerates old age and whatever is respectable, and it adores God." Besides the proof already afforded us of the activity of this feeling in the mind of Johnson, we are expressly told, that the tendency was so strong as to prevent him exercising his intellect in determining the objects of worship. "His veneration," it is stated, "for every thing connected with religion was extraordinary; he pulled off his hat when he entered within the walls of ruinous Catholic churches in Scotland; and he regarded the bishops and dignified clergy of the church of England *with great reverence;*" and he displayed a high admiration of whatever seemed ancient and venerable, so as to give him "*want of hardihood in the exercise of his understanding.*" It is mentioned in the Outlines of Phrenology, that this sentiment "leads to a reverence of ancestry and of superiors in society." This, then, was clearly the source of those feelings in Johnson's mind.

Nothing has excited more astonishment in the minds of philosophers, than that a man of Dr Johnson's mighty intellect should have been so credulous and superstitious as to believe in supernatural agency, ghosts, second sight, lucky days, &c.; for, says his biographer, "though a jealous examiner of the evidence of ordinary facts, yet his weakness on the side of religion, or where any thing *supernatural*

* Essays on Phrenology, p. 164.

was supposed to be concerned, rendered him willing to give credit to various notions with which superstition imposes upon the fears and the credulity of mankind." "In his conversations concerning ghosts, he appears to have been aware of the ridicule attached to credulity; but his actual belief can scarcely be doubted."—P. 70. But Phrenology again shews its superiority in the simplicity with which it explains this singular feature. Dr Spurzheim, for instance, in speaking of the faculty of Wonder, says, that he has observed that a large endowment of the organ "gives the tendency to *seek and see the supernatural in every thing*," "*and to believe in inspirations, forewarnings, phantoms, demons, visions, witchcraft and astrology, and such like*;" *and that "it contributes much to religious faith, by a belief of mysteries and miracles.*" This tendency, depending on an appropriate organ, may thus exist with any degree of intellect from the highest to the lowest. And so correctly does Spurzheim, in the above passage, portray this peculiarity in Dr Johnson's character, that it almost seems as if the latter had sat for his likeness.

We are told also, that "he was proud and extremely conscious of the talents with which he was endowed;" that "the independence of his mind, and the sense of his own worth, gave rise to an asperity of manners," during his less prosperous days, which often made his company disagreeable.—P. 76. "He not only asserted his opinions in a presumptuous and dictatorial form, but he considered so little the trouble which he gave to others, that he was usually an unwelcome visitor to the mistress of every house." He was likewise remarkable for an impatience of restraint, and a desire to engross the attention of the company. These peculiarities are easily referable to a large endowment of the phrenological faculty of Self-esteem, which is said to "lead to pride, arrogance, and disdain,"* and, when very large and not duly regulated, "to induce the impression in others, by an unreserved and authoritative manner, that the individual considers himself as infinitely elevated above his fellow-men. The expression which it gives to the tone and manners is cold and repulsive." His biographer, after saying that he was a man of "violent passions," informs us, that "he was extremely fond of disputation, and as he could

* Outlines, p. 72. Combe's Essays, p. 159.

never endure to be outdone, he uniformly contended for victory at whatever cost, and he did not hesitate in the strife, to make reason turn traitor to herself, and to support sentiments altogether opposite to what he himself seriously judged to be true and rational. He rose into the most boisterous vehemence of voice and manner, and used the utmost asperity, or even gross rudeness and insolence of language," so as to receive from Garrick, who loved and respected him, the name of a "*tremendous companion.*"*

To shew how easy it is to analyze character phrenologically, and to refer every manifestation to its simple elements, I shall again quote a few sentences from the works on Phrenology. Mr Scott, in his account of Combativeness, says,—"He who is endowed with this power dashes through obstacles and struggles on to the last," and those who have much of it are great arguers. "The spirit of contention and opposition is so strong in them, that they cannot prevail upon themselves to assent to the simplest proposition, and 'even though vanquished they can argue still.'" Joined to large Destructiveness, it is stated "to give the tendency to rage," and the form in which this combination manifests itself when opposed, or not duly restrained by the higher powers, seems to be the "passion of anger:" "it excites to loud threatening," and "imparts a bitterness and force to every kind of vituperation and sarcasm."† This was then, undoubtedly, the source of the violent passions of Dr Johnson. The prejudices which beset his mind were the effect of this large endowment of propensities and sentiments, which made it impossible for him to use his intellect in every instance with proper effect. His judgment was biassed by these feelings, just as that of a man in love is with regard to the object of his attachment, whose bad qualities he cannot discern, although he may be very sharp-sighted in regard to those of other people.

The misery in which the life of Johnson was constantly involved, arose from a want of harmony in the proportions of his most powerful faculties. The animal propensities were in a state of continual warfare with his higher senti-

* Goldsmith has said, "There is no arguing with Johnson; for when his pistol misses fire, he knocks you down with the butt end of it."

† Transactions of the Phrenological Society, p. 140, *et seq.*

ments, which we know to have been powerful, from the general tendency of his writings towards virtue, from his religious feelings, and from many acts of "generosity and humanity" which he performed, "when not under the influence of personal pique, of pride, or of religious or political prejudices;" all of which interested his predominant faculties too strongly to allow his Benevolence alone to work against them. Unfortunately for his happiness, society was the very field for still farther exciting faculties naturally too active, in a degree that his moral and religious sentiments made him feel keenly was improper, but which they were unable to restrain. Their effect was aggravated by large and almost deranged sentiments of Cautiousness and Wonder, which added a gloomy and superstitious despondency. When placed in circumstances in which his Self-esteem, Firmness, Combativeness, and Cautiousness could find no object to contend with, as when writing in his closet on general subjects, his moral sentiments and intellect maintained a complete ascendency, and infused a spirit of benevolence and justice into all his productions. Even in society, when "listened to with reverence," he was "placid and instructive." But when his Pride, his Combativeness, and his Firmness, were excited by opposition, they all worked in one direction, with an energy proportioned to his large brain and mighty mind, and made him in reality a "*tremendous companion*." If he had possessed a smaller share either of moral sentiments or of animal propensities, he would have been happier. In the first case, his happiness would have been allied to that of the brutes, indulging their propensities without any feeling of remorse; in the second, it would have been the happiness of the good man, whose tendencies rarely lead him into temptation.

His favourite intellectual pursuits, we are told, were those of metaphysical discussion, moral theories, biography, &c.; but he was never systematical. He knew little, and cared less, about history or the natural sciences. This is explained phrenologically, by a larger endowment of Causality and Comparison, "which give deep penetration, and a perception of logical consequence in argument, and are large in metaphysicians," &c. than of Individuality and Eventuality, which give a "capacity for observation and detail," and for "natural history, botany," &c.; for "know-

ing something of almost all sciences and arts," with ease to the possessor.

In this short analysis, I have confined myself entirely to the more prominent features in the character of Dr Johnson; because many of those whom I now address, being unacquainted with Phrenology, would be unable to understand the explanation of the more delicate shades into the composition of which a combination of faculties enters. Instead of pursuing it farther, I therefore prefer a short examination of some peculiarities in the character of Pope, as given in Dr Johnson's Lives of the Poets, and which are equally inexplicable on any metaphysical theory with which I am acquainted. But in this, as in the former, it must be kept in mind that I do not mean to embrace the whole, but a part only, of the character.

Dr Johnson tells us, that Pope was remarkable for "great delight in artifice, and that he endeavoured to attain all his purposes by indirect and unsuspected methods;" that "he hardly drank tea without a stratagem;" that "if he wanted any thing in the house of a friend, he never asked for it in plain terms, but would mention it remotely, as something convenient." He practised his arts on such small occasions, that Lady Bolingbroke used to say, in a French phrase, that he played the politician about cabbages and turnips." Dr J. adds, that he, Pope, "was afraid of writing, lest the clerks of the post-office should know his secrets," and then speaks of his general habits of secrecy and cunning.

There is no metaphysical principle to which this peculiarity of Pope's character can be referred; but, upon opening the first book on Phrenology, we see at once that it comes precisely within the domain of the faculty of Secretiveness. Mr Combe, for instance, tells us in his Essays, that those in whom this organ is "largely developed, are fond of throwing *a dense covering* of *secrecy* over all their sentiments and actions, even the *most trifling and unimportant*, and conceive that the eye of the world (in Pope's case, the eye of the clerk of the post-office) is always looking into their breasts, to read the purposes and designs there hatched, but which discovery they are solicitous to prevent." This faculty was clearly the moving principle in such conduct.

We are next told, that he had a great deal of vanity, " and felt great delight in enumerating the men of high rank with whom he was acquainted;" and that " he was so extremely sensible to praise and censure, that every pamphlet disturbed his quiet, and his extreme irritability laid him open to perpetual vexation." This comes precisely within the limits of the phrenological faculty of Love of Approbation, which is said to " make us attentive to the opinions of others," and " to give the capacity of being delighted with applause and grieved with censure."

The extent to which this paper has already run, forces me to omit other points in Pope's character, which admit of as easy an explanation as the above. What I have said, however, is sufficient to shew how every diversity of moral and animal character may coexist with every variety of intellectual powers, and admit of a simple and consistent explanation on the principles of the new philosophy. In farther illustration of this part of the subject, I beg leave to refer to some beautiful and interesting specimens, contained in the Transactions of the Phrenological Society, of the successful application of Phrenology to the analysis of the talents and dispositions both of virtuous and of vicious individuals. The first of these, by Mr Scott, on the natural talents and dispositions of King Robert Bruce, as compared with the cerebral development indicated by his skull, will be read with intense interest by every lover of nature. Nor are the reports on the natural characters of Mary M'Innes, Gordon, Bellingham, and others, of less interest or importance to the philosopher whose object is the improvement and happiness of the human race. Indeed, I may safely affirm, that that single volume contains evidence sufficient to settle for ever the question now under consideration.

If the peculiarities of individual character are so easily referable to, and explicable by, the principles of Phrenology as I have shewn them to be, it is natural to suppose that those of national character will admit of as simple a reference and explanation. This point I now propose shortly to discuss.

Many philosophers, mistaking the effect for a cause, attribute the varieties of mental constitution which distinguish nations from each other, to a difference of customs, habits,

laws, and government; which, although not without a considerable reactive effect, are, strictly speaking, the *result* and not the cause of the former. Phrenology will be found to afford us much assistance in investigating this interesting subject, as will be seen by a reference to a paper on the Phrenology of Hindostan by Dr Paterson, read to the Phrenological Society, and published in their Transactions. His conclusions are drawn from the actual examination of upwards of 3000 Hindoo heads, of every tribe and of every province, and from the careful study of many native crania, which he took the precaution of measuring to prevent mistakes. He thence explains, most satisfactorily, the weakness of the character of the Hindoos, taken as a nation, and their subjection to a few thousand Europeans, and also their stationary state of civilization; for the average size of the adult Hindoo head does not exceed that of a European at fifteen, and consequently the mental energy and capacities are proportionate. They are very remarkable as observers, which he found to be uniformly connected with a large development of Individuality. The mildness and passive softness which characterise them, he found to arise from deficient Combativeness and Destructiveness, and their cunning from a large development of Secretiveness. Dr Paterson's paper, in short, affords a novelty in the philosophy of mind—the spectacle of different individuals, in different parts of the world, totally unconnected with each other, studying the phenomena of mind, and uniformly referring them to the same general principles or faculties—a thing utterly unknown to the old schools, and of itself a strong proof of the soundness of the principles of the new philosophy.

Among the barbarous and uncultivated nations of America, Asia, and Africa, the differences of cerebral development are more perceptible to the inexperienced eye, and the traits of character are, in general, more broadly marked, than among the civilized nations of Europe, and they consequently are more easily appreciated by those who are on the spot. Notwithstanding all these advantages, however, I shall not select them for examination; because the difficulty of obtaining accounts of the fair average form of head from travellers who have paid no attention to it, and of becoming acquainted with their motives and modes of

thinking, from unacquaintance with their language, might be urged, however unjustly, against the strongest evidence which they could afford. Having resided for a considerable time in France, and made many observations on the development and manifestations of that nation, both in its capital and provinces, I shall content myself with a short and necessarily imperfect phrenological analysis and comparison of some of their natural talents and dispositions with those of the English. I choose these, because, if wrong in any one respect, I can most easily be confuted by other observers now present, who can speak as to the character at least, if not as to the development of brain.

The French are universally admitted to be more ingenious than we are in the invention and construction of gewgaws, trinkets, and such trifling contrivances as require more neatness of workmanship than depth of reflection. It is also admitted, that they have greater quickness of perception, and a greater talent for observing, acquiring, and retaining a knowledge of facts, phenomena, and details; without, however, having so much power of tracing links of causation, and arriving at general principles. Thus, while they are extremely ingenious in making new observations and isolated discoveries in physical and natural science, it is frequently left to the English, or to the Germans, to find out the principle which connects them together, and to render them available to the purposes of life. Even a slight acquaintance with Phrenology would lead us at once to ascribe this peculiarity of mental constitution to the French having a larger endowment of Constructiveness, Individuality, and Eventuality, and a smaller endowment of Causality, than the English have; and I may add, that, from observation, I know this to be the case. The propensity to construct is greatly aided by, but is by no means a constant accompaniment or result of, intellectual power; for many idiots manifest it in a great degree. Fodéré knew several, who taught themselves the "repairing of watches, and the construction of some pieces of mechanism;" and he expressly adds, "that this could not be attributed to the intellect, for these individuals not only could not read books which treated of the principles of mechanics, but they became confused if they were mentioned, and never made farther progress."

The superior quickness of perception, and talent for the observation and recollection of facts and phenomena, which the French possess, are easily explained by large Individuality and Eventuality, which give rise to this kind of cleverness. The same faculties, combined with Constructiveness, account for their ingenuity. Their inferiority to us in the discovery of principle, and in the useful application of their knowledge, is to be ascribed to a smaller endowment of Causality or reasoning power. "When Causality is weak," we are told,* "there is a difficulty in perceiving the connexion between premises and conclusions; an incapacity of thinking deeply; and a mental blindness to all abstract and philosophic disquisitions. It gives a genius for metaphysics, and for deep reasoning of every kind." Now, it is well known, that the French have never excelled as metaphysicians, while our own countrymen have always been remarkable for metaphysical writing. It is from this great endowment of Individuality, Eventuality, and the other perceptive powers, joined to moderate Causality, that the French are fond of knowledge without any great regard to its utility; and that they excel in natural history, chemistry, botany, and in those departments of science and of art which require an accurate observation of the qualities and changes of bodies rather than depth of reflection. It is this combination also which fits them for excelling in anecdote and biography, and in the delineation of individual existences; while they want the power of taking profound or comprehensive views. Hence it is also, that, while their literature abounds in "Memoires *pour servir à l'histoire*," it can scarcely boast of a history itself. The English again, with more Causality and less Individuality, are more constantly in pursuit of causes and principles than of mere facts. They endeavour to penetrate motives as well as actions, and to take deep and extensive views of nature; and hence, with fewer Memoires *pour servir* a l'histoire, they have more of history itself.

The French and English differ extremely in another respect. In the company of strangers of whom he knows nothing, a Frenchman will begin to talk of himself and his own affairs without reserve, in a way which at first astonishes our wary countrymen, and leads them to suspect

* Combe's Essays, p. 202.

there is a design under it.* The true Briton, in the same circumstances, maintains a long silence, or talks a little about indifferent subjects, and makes his own observations on the company; and it is only when his scruples are satisfied that he will allow a word about himself to escape his lips. This is often remarked by the French, and by them is falsely ascribed altogether to pride. Self-esteem is no doubt one of the ingredients, but it is much assisted by our great endowment of Secretiveness and *Cautiousness*. The former is said to "give an instinctive tendency to conceal, which, according to its degree of intensity, and the direction it receives from the other faculties, may produce slyness or cunning;" and "those in whom it is deficient" are said "to be too open for the general intercourse of society." "It is essential to a prudent character," and enables us to suppress thoughts or feelings, the expression of which might be injurious to ourselves and others. Cautiousness, again, as the name expresses, constantly bids us "beware." It is the want of these two which produces a rattle-pate. It is their activity which tempts the Scotsman to answer one question by asking another, which a true Frenchman never does. It gives what may be called *tact*, which our countrymen possess in a higher degree than the French. The latter, even when most anxious to please, will often say things which would give offence, if we did not know that none was meant. This the Frenchman is very apt to do in the company of those whose habits of thinking differ much from his own.

The doubts, and hesitations, and dismal forebodings,

* The French are thus described by Dr Heylin in 1679:—"The present French, then, is nothing but an old Gaule moulded into a new name; as rash he is, as headstrong, and as hare-brained. A nation whom you shall winne with a feather, and lose with a straw; upon the first sight of him, you shall have him as familiar as your sleep, or the necessity of breathing: in one hour's confidence you may endear him to you, in the second unbutton him, *the third pumps him dry of all his secrets*, and he gives them as faithfully as if you were his ghostly father, and bound to conceal them *sub sigillo confessionis*. When you have learned this, you may lay him aside, for he is no longer serviceable."—"He hath said over his lesson now unto you, and now must find out somebody else to whom to repeat it. Fare him well; he is a garment whom I would be loath to wear above two days together, for in that time he will be threadbare."—"In a word (for I have held him too long), he is a walking vanitie in a new fashion."

which lead the Englishman to look towards the future, and to consider thoroughly the consequences before resolving upon action, are plainly referable to a larger Cautiousness than that possessed by his more vivacious neighbours, who habitually look to the present more than to futurity. This feeling is the source of that tinge of melancholy which has often been remarked in us, and when very active it leads to despondency. Joined with much Secretiveness, it gives a suspicious cast to the mind, and makes us attend to the motives more than to the mere act; for we think there is something hidden which we ought to see. None of these feelings predominates in the mind of a Frenchman. He acts more on the spur of the moment. If good come of it, *tant mieux*,—if evil, *tant pis*; but he does not afflict himself with the reflection that he might have done better. "Sufficient for the day is the evil thereof" is his principle.

The love of praise, and the consequent vanity of the Frenchman, are clearly referable to a great endowment of the phrenological faculty of Love of Approbation, the organ of which I know to be larger in them than in the heads of our countrymen, and more especially when compared to that of Self-esteem, of which we have undoubtedly the greater share. It is the greater Self-esteem which, joined to other faculties, gives that nice sense of dignity for which the English are remarkable, and which, to the Frenchman, often appears somewhat ludicrous. To the latter, no mode of enjoyment, however trivial or childish it may seem to be, is ever, on that account, rejected. His dignity takes no offence. But with the Englishman it is widely different. He often rejects an amusement harmless in itself, from a sense of offended dignity, although, in other respects, he may have a relish for it. His Love of Approbation is swayed by his Self-esteem, whereas the love of praise is the ruling passion of the Frenchman, and forms no small ingredient in that politeness for which his nation has long been celebrated. It is the source of their vanity, of their love of finery and of novelty, and of that ever-to-be-repeated and never-ceasing sound in the mouth of a Frenchman, "*Glory*." * It is also the origin of many of their noblest

* "It is not," says a lively writer, "the love of fighting that leads a French army from Paris to Moscow, but *la gloire*. The *philosophe* who sits at his midnight lamp, cannot contemplate his triumph and

institutions, and, joined to a certain portion of Veneration, is the chief source of that intense admiration of courts and courtiers, red ribbons and crosses, by which they have always been distinguished.

That compound feeling of the mind, which is almost unknown to the French, but which they have kindly denominated "*mauvaise honte*," arises from a combination of the faculties which I have just said mark our character. Mauvaise honte is merely an excessive desire to attract notice, and to please, arising from Self-esteem and Love of Approbation, the former of which gives a kind of feeling of deserving it,—joined to an excessive fear of not succeeding in our object, arising from Cautiousness,—and a strong desire to lie half-concealed, and to advance with a measur-

discoveries without mixing them up with *la gloire* of another kind—the scientific reputation of *la grande nation*. And when a Frenchman hurries to the *Theatre Français*, to witness the representation of a comedy of Molière, or a tragedy of Racine or Voltaire, a view to his own gratification is not the sole impelling motive; he fancies —nay he is sure—that *la comedie Française* is the most perfect in the world; that there never was but one Racine, or one Voltaire; and that it is a duty to uphold and patronise that which so nearly concerns the glory of his country. The national vanity of the French is boundless and incurable. It embraces the whole range of the arts and sciences—all that in which men contend for pre-eminence, or pride themselves in. It is this that carries a Frenchman to the *Academie de Musique*, to listen to the worst music in the world—this that crowds the gallery of the French school of painting, and leaves the Italian school neglected—this that produces a thousand copies of *David*, and not one of Raphael, or Titian, or Murillo—this that endured the despotism of Louis XIV, because he was the vainest of kings, and loved *la gloire*—this that tore down the Bastile, murdered a king, and abjured God, because such things were a spectacle for the world to gaze at—this that received the yoke of Napoleon, because the spectacle of revolution was no longer new, and because his ambition and *la gloire Française* went hand in hand—this that encouraged industry, commerce, and manufactures during fifteen years, because France could not be great without them—and, finally, this that now threatens to desolate Europe with the scourge of war, because *la grande nation* is beginning to be forgotten."—*Switzerland, the South of France, and the Pyrenees, in* 1830. *By Derwent Conway*, vol. ii. p. 67.

Dr Burrows, in his work on Insanity, speaks of the "national taste" in the mode of committing suicide in different countries. "The English," says he, "prefer shooting, the Prussians hanging, while the French, fond of effect in all things, shew it even in this last act, and prefer making an exit from some elevated or conspicuous place, such as a high column, monument, or bridge, the time mid-day, and in the presence of a multitude. This is the *ne plus ultra*, and gives great eclat to the character of the suicide."

ed pace, step by step, as we feel ourselves becoming more and more secure, arising from large Secretiveness. The full blaze of instant attention cannot be endured without as instant confusion, and the very fear of failure often produces it.

In point of firmness, perseverance, and steadiness, the French are much our inferiors; indeed, fickleness has long formed a part of their character. This is to be ascribed to a powerful faculty of Firmness, which the English possess in so high a degree as often to produce stubbornness and obstinacy, which may be well or ill applied, according to circumstances. "Grace aux Anglais," said the Professor Faujas St Fond, in allusion to this part of our character, "*qui s'obstinent* à penetrer dans les pays les plus steriles et les plus barbares," the boundaries "of science were daily enlarged. It is not alone," said he, "in the flowery paths of science that you find them; but, at one time, broiling under the meridian sun of Africa, and, at another, frozen amidst the polar ice." It is this strong perseverance, combined with the faculties already mentioned, which fits the English for difficult enterprise. From their active Cautiousness, they seldom act until they have formed a pretty correct estimate of the good or bad consequences likely to result from or accompany the intended action. This they are enabled to do by their larger Causality, or power of tracing cause and effect; and hence they act upon principle, and must, before beginning, be satisfied of the adequacy of the means to the end proposed. Such preparation, joined to large Self-esteem and Firmness, produces a rational feeling of independence and perseverance, that is superior to almost any circumstances.

The Frenchman, on the other hand, buoyed up by a great endowment of Hope, unassailed by the useful though at times gloomy foresight of Cautiousness, and with no remarkable portion of reasoning power, dreams not of obstacles until they actually start up before him. If easily surmounted, all is yet well; but if they seem to be insurmountable, or so formidable as to require a long-sustained effort to overcome them, then his confidence, not being founded on any estimate of what he had to hope for or fear, or on a feeling of his own superiority to the circumstances, as suddenly forsakes him as it was suddenly generated. If indeed he is in a situation where *the love of glory*

may still affect him, where he knows that the eyes of his country or his king are upon him, he may still bear up; but not if thrown entirely upon his own resources, and upon the native energy of his own mind. Many historical facts prove the truth of these remarks; and the conduct of the crews of both nations, on the loss of the Alceste and Medusa frigates, is in itself an excellent *illustration.*

The lively gesture and vivid natural language of the French proceed from this difference in their mental constitution, aided by more Imitation than we have. Every faculty, when active, has a language of its own, easily intelligible to those who have the same in an ordinary degree. Now the natural language of Love of Approbation is the display of every quality to attract notice, and the vivid and unrestrained emission of every thought as it rises in the mind. The natural language of Secretiveness, on the other hand, is that of the cat watching the mouse; it is quiet and concealment: that of Cautiousness is attention and seriousness. In point of fact, therefore, we exhibit the natural language of the different faculties quite as correctly as the French do. The only difference is, that the faculties which predominate in us are only secondary in the mind of the Frenchman, and *vice versa.* So that an Englishman meeting a stranger, with a grave face and silent tongue, exhibits the natural language of his predominant feelings, quite as much as the more vivacious Frenchman with the friendly smile, polite bow, and shrug of the shoulders.

The French have long excelled as elemental writers in natural history and physical science, from the clearness and precision with which they apprehend and communicate their ideas. This is to be explained, partly from their large Individuality enabling them to perceive and to retain for use what they have once acquired, and partly from a large Concentrativeness, which aids in enabling them to separate what is essential from what is of no importance, and merely to state what bears upon the point. Individuality furnishes them with a ready command of the ideas which they have in store. Hence the perspicuity and fluency of many of their lecturers, Gay Lussac and Thenard for instance, who never use written discourses or even notes.

There is another general but important difference which Phrenology has more clearly brought to light and explain-

ed, and which I beg leave to describe in the words of the Edinburgh Review,* lest it be imagined that it is a difference perceptible only to *oculi interni*. "To their ability in the art of war, the French have joined considerable glory in literature, in the fine arts, and much ingenuity, but hardly any of those things which *denote or constitute dignity of intellect, or energy of character, or vast and comprehensive capacities;* in short, they *are deficient in most of the features which the large pencil of history would paint as exalted.* In painting true and general nature, in delineating great features of mind, and strong emotions of the soul, they cannot be compared to us, because they have an *imperfect original* of these things before their eyes." Some of these peculiarities are referable to the particular combination of faculties already mentioned, but the general effect is to be attributed to a smaller size of the brain, as a whole, than is found in England. It is general size alone, joined to a favourable combination, which gives a commanding power and energy to the mind, and fixes the attention and makes an indelible impression on the minds of others; and it is in such cases that every tone seems to an inferior mind the natural accent of command. In our own profession, Gregory was an excellent instance of this effect of size, and Abernethy is another. The French have not this quality. They have greater activity of brain; they work more cleverly, and go over a great deal of matter in a very pleasing manner and in a short time; but there is no overpowering sense of greatness to weigh down the hearer, or make him feel his inferiority. Such are a few of the distinguishing features of the French and English characters, and such is the explanation of them afforded by Phrenology: it is for you to judge how far it is sound or satisfactory.†

Having now shewn as clearly as my own abilities and the narrow limits of an essay would admit, that Phrenology has a real foundation in nature, and that it does afford a

* Edinburgh Review, 1821, p. 176.

† I need scarcely add, that although the development here stated as characteristic of the French, is the result of numerous observations made both in the capital and provinces, on the dead as well as on the living, I do not, by any means, lay it down *as ascertained.* The shades of some of the organs may be different, but I believe the outline will be found correct. The subject is too extensive for one individual.

satisfactory explanation of the moral and intellectual nature of man, I will scarcely be asked of what use or importance it can be to the medical man to be acquainted with its doctrines. For when we consider our almost total ignorance of the nature of insanity, and the assistance to be derived in our future inquiries from a knowledge of the primitive mental faculties and of the organs by which they act, in enabling us to distinguish what is merely symptomatic from what is essential, and in enabling us to conduct the moral as well as the medical treatment on the soundest principles, we cannot look without a feeling of admiration on the labours of the two distinguished men who have done so much to fill up one of the greatest deficiencies which ever existed in medical and philosophical science. This is only one of its numerous and beautiful applications. In every branch of knowledge in which man is the object of our inquiries, its uses are infinite, because it furnishes the only sound principles upon which we can with safety proceed to educate, to enlighten, or to legislate. I have already trespassed too long on the time of the Society to admit of my saying more, by way either of illustration, of obviating objections, or of proving its utility. The objections I must leave to the debate, and have now only to apologize once more for the length to which this essay has run, for the time which I have consumed, and for the imperfect way in which I have treated the subject, which, indeed, is by far too extensive to be judged of or comprised in an essay, even had my powers been equal to my wishes. If I have succeeded in stating the question so as to elicit a full and candid discussion of its merits, and to incite to observation those who are still unacquainted with it, my object has been completely attained. I now, therefore, leave the essay, with all its faults, to the indulgent consideration of my fellow-members.

INDEX.

Acquisitiveness, illustration of, 37.
Actor, sources of the talent of an, 20, 98.
Alderson, Dr, case of morbid excitement of the organ of Number, reported by, 157.
Alexandre, Mons., a ventriloquist, 22.
Allan's pictures, 115.
Apollo Belvidere, proportions of the, 132.
Apparitions explained, 54. See *Spectral Illusions.*
Aristotle's philosophy, 280. His opinions of the functions of different parts of the brain, 298.
Arithmetical tuition at Mr Wood's sessional school, 221.
Armorial bearings, phrenological remarks on the mottos of, 268.

Bacon's Ideality strong, 74. His bust, 114.
Barbarians, eloquence of, 183.
Bashfulness analyzed, 350.
Brain, its shape discoverable by inspecting the skull, 4, 131. Its influence on digestion, 254. Historical notice of early opinions respecting its functions, 298. Plurality of the cerebral organs illustrated, 322. Powerful minds of persons with large brains, 292, 353.
Bridewell, Glasgow, 209.
Brougham, Lord, eloquence of, 196.
Brown, Dr Thomas, quoted on the ignorance of anatomists concerning the uses of the different parts of the brain, 310.
Brutes deficient in the reflective faculties, 232.
Burke, Edmund, his eloquence, 193.
Burke, Master Joseph, a juvenile actor, 112.
Busts, ancient, 113.

Causality, 232, 358, 347.
Cautiousness, illustrations of, 38, 348. Its organ the seat of hypochondriasis, 261.
Cerebellum small in childhood, 324.
Chalmers, Dr, his eloquence, 198. Quoted on the opposition at first made to the Newtonian philosophy, 291.
Character, comparative influence of nature and circumstances in the formation of, 47, 95, note, 331. Opposite phases of, in the same individual, 294. Natural differences of character, individual and national, explained by differences of brain, 334, 344.
Chatham, Lord, his eloquence, 192.
Children, temperament of, 135. Size of their heads, 168. Succes-

sive development of their faculties, 322. Small size of their cerebellum, 324.
Christianity a promoter of civilization, 191.
Cicero, analysis of his eloquence, 188.
Circassian head, 116.
Clever practical men, estimate of their authority in the profounder and more abstract departments of science, 232, 253.
Combativeness powerful in Dr Johnson, 341.
Combe, Dr Andrew, papers by, 125, 143, 205, 244, 276, 317.
Combe, George, papers by, 1, 47, 69, 96, 113, 152, 209, 232, 266, 272, 279, 298, 311.
Conscientiousness, 98.
Constructiveness, illustrations of, 37, 43, 276, 327.
Convicts, Mr Deville's examination of heads of, 140.
Criminals, treatment of, 209. To be regarded as patients, 210. Punishment of, 212. Tendency to crime can be removed only by removing its cause, 214.
Cromwell, observations on the character of, 292.
Cullen, Dr, quoted on hypochondriasis, 252; on the connexion of the mind and the brain, 309.
Cuvier quoted on the relation between the intelligence of animals and the size of their cerebral lobes, 336, note.

Dancing, 238.
Darwin, Dr, on ideas, 309.
Deaf and dumb dancing, 238.
Demosthenes, how cured of stammering, 150. Estimate of his eloquence, 186.
Derangement, mental, case of, with gradual diminution of the size of the head, 152. Takes place only when organs are diseased, 246. See *Insanity*.
Descartes on the seat of the soul, 307.
Destructiveness, illustrations of, 35, 86, 341.
Deville, Mr James, his examination of the heads of 148 convicts, 140.
Dialogue between a philosopher of the old school and a phrenologist, 1.
Digestion, influence of the brain on, 254.
Diseases to which different temperaments predispose, 136.
Dissection does not reveal vital functions, 2.
Dolce, Ludovico, mapped head given by, 303.
Dreaming, phenomena of, indicate a plurality of cerebral organs, 332.

Education, how far influential in the formation of character, 51, 95, note, 331. Ought to be modified according to the temperament of the child, 208. Method of, at the Edinburgh Sessional School, 215. Explanatory method of, 216. Individuality too much neglected in, 219. Lessons on objects, 220. Infant schools, ib. Instruction in history and arithmetic, 221. Whether emulation is a useful stimulant in, 222. Qualifications of a successful teacher, 230. Phrenology applied to the education of a youth, 272. On the advantages of, 311. An educated and uneducated mind compared, 312.
Elliotson, Dr, case where dispositions were inferred by him from a skull, 117.
Eloquence, phrenological analysis of, 178. Defined, 181. Of sava-

ges and barbarians, 183; of the Greeks, 184; Romans, 188; British senate, 192; the pulpit, 197.
Emulation, its merits as a stimulant in education discussed, 222.
England, size of heads in different parts of, 161. English and French character and brain compared, 346.
Equilibrium, power of, deranged, 58, 64.
Experiment, phrenological, 117.

Faculties, perceptive and reflective, distinguished, 332, 258. Effects of old age on the faculties, 235. Their successive development in youth, 322.
Female head and character, 324.
Fine arts, phrenology applied to criticism in the, 113.
Firmness strong in the English, 351.
French and English character and brain compared, 346. Vanity of the French, 349. Their heads smaller than those of the English, 353.
Gall, Dr, his discovery of phrenology, 310, 319.
Garbutt, a ventriloquist, 21.
General, requisites of a, 207.
Genius usually partial, 325. A gift of nature, 326. Peculiarities of, explained, 330.
Ghosts explained, 54. See *Spectral Illusions.*
Glasgow Bridewell, 209.
Gordon, Bernard, his opinions of the functions of different parts of the brain, 298.
Grecian eloquence, 184.

Happiness, 86, 313, 342.
Hartley quoted on the connexion of the mind with the brain, 308.
Hats, different sizes of, in different countries and provinces, and ranks of society, 158, 170. Hatters' measurement explained, 160.
Head, size of, in different countries and provinces, 158, 170. Does its size increase or decrease after the period of maturity? 168. Size of heads of children, ib. Impressive and powerful minds of persons with large heads, 292, 353. Male and female heads compared, 324.
Hindoos, their character and cerebral development, 345.
Historical notice of early opinions respecting the functions of the brain, 298.
History, talent for writing, 347.
Hubard, Master, a juvenile artist, case of, 41.
Hunter, Dr John, curious derangement of his mind, 64.
Hypochondriasis, on the seat and nature of, 244. An affection of the brain, 246; but more particularly of the organ of Cautiousness, 261. Method of cure, 263.

Ideality, 72, 74.
Idiocy, partial, a proof of the plurality of cerebral organs, 333.
Imitation, faculty of, necessary to ventriloquists, 30, 104.
Individuality too much neglected in education, 219.
Infant schools, 220.
Infidelity compatible with strong Veneration, 82.
Insanity, its phenomena destructive of many philosophical tenets, 333, note. Partial, 334. See *Derangement.*
Irish head, size of the, 165.

Jardine, Professor, on the method of teaching logic, 280.
Joseph, Mr Samuel, accuracy of his busts, 115.
J. L. a Chatham convict, case of, 117.
Johnson, Dr Samuel, phrenological analysis of his character, 338.
Juries, scolding of, absurd, 96.

Lavater's Physiognomy, 307.
Locality deranged in John Hunter, 65; in drunkards, 67.
Locke and Milton, their genius compared, 72.
Logic and moral philosophy, address to students of, 279. Inutility of logic and metaphysics, 284.
Love of Approbation, strong in Voltaire, 85, Pope, 344, and the French, 249.
Low spirits, 244.

Materialism, 236.
Mechanical genius, cases of, 276, 327.
Melancholy, 244, 338, 349.
Mengen, Baron, a ventriloquist, 18.
Mental philosophy, its importance as the foundation of other sciences, 286. Diversity of opinions in, 287. True mental philosophy unknown before the discovery of phrenology, 288.
Metaphysics, scholastic, 280.
Milton's Garden of Eden, faculties necessary for the conception of, 69. Genius of Locke and Milton compared, 72.
Moral philosophy, address to students of, 279.
Mottos of armorial bearings, phrenological remarks on, 268.

National character, diversity of, explained by diversity of cerebral development, 344.
Natural language, 352.
New discoveries, slow progress of belief in, 8, 289.
Nominalists and Realists, controversy between them, 281.
Number, case of morbid excitement of the organ of, 157.

Old age, its effects on the mental faculties, 235.
Opposition to new discoveries, 8, 289.
Organs cerebral, plurality of, 322. Size of an organ, *cæteris paribus*, the measure of its power, 126, 162, 335.
Ormerod, Ann, case of defective Tune, 314.
Owen, Mr, his views of the formation of character opposed, 47.

Pain in the situation of organs of deranged faculties, cases of, 56, 157.
Perceptive faculties distinguished from the reflective, 232, 258.
Pericles, his large head, 133.
Phrenologasto, Travels in, 88.
Phrenology, how to be tested, 5. Objection that no first-rate men are phrenologists, answered, 7. Practical application of phrenology on a voyage, 33. Applied to criticism in the fine arts, 113. Phrenological experiment, 117. Objection that phrenology leads to materialism, 236. Best mode of making converts to, 266. Applied to the education of youth, 272. Utility of a knowledge of, 274, 354. Essay on the question, Does Phrenology afford a satisfactory explanation of the moral and intellectual faculties of man? 317. Principles of, 319.
Physicians, their conversation beneficial to patients, 266.
Physiognomy, 305.

Pineal gland supposed by Descartes to be the seat of the soul, 307.
Playfair, Professor, his account of the slow progress of the Newtonia philosophy, 289.
Pope's powerful Secretiveness, 343.
Porta, J. B., his work on Physiognomy, 305.
Power and activity of the faculties distinguished, 127. Power c mind conferred by a large brain, 292, 353. Power of an organ in creases with its size, 126, 162, 335.
Profession, choice of a, with reference to temperament, 208.
Pulpit-eloquence, 197.

Ranks, different sizes of hats worn by different, 161, 170.
Reflective and perceptive faculties distinguished, 232, 258.
Religious faculties, 76, 338.
Roman eloquence, 188.

Sailors, their characteristic dispositions, 174.
Saint Gille, a ventriloquist, feats of, 19.
Savages, eloquence of, 183.
Scholastic metaphysics, 280.
Scotch head, size of the, 164.
Secretiveness, illustrations of, 30, 111, 343. Large in actors, 100 Weak in the French, 347. Strong in the British, 348.
Self-esteem, illustrations of, 35, 152, 185, 224, 340, 349.
Simpson, James, papers by, 14, 54, 75, 98, 140, 178, 215, 238, 268, 292
Size of an organ, *cæteris paribus*, the measure of its power, 126, 162 335.
Skull exhibits the shape of the brain, 4, 131, 337. Relation of it thickness to the size of the other bones, 131.
Slave-trade, 195.
Spectral illusions, phrenological explanation of, 54. Case of Mis S. L. 57. Additional cases, 174.
Stammering, causes and cure of, 143.
Stewart, Dugald, remarks on his analysis of the faculties necessar for the conception of Milton's Garden of Eden, 69. Quoted o the importance of inquiries into the laws of union of body an mind, 318.
Students, low spirits of, 259. Address to students of logic and mora philosophy, 279.
Suicide, national taste in the mode of committing it, 350, note.
Sympathy, disorder of functions from sympathy with remote part diseased, 247.

T. D., case of, 152.
Teacher, mental qualifications of a successful, 230.
Temperaments, Dr Thomas's theory of the, 125, 205. Importanc of a knowledge of the, 136, 207. Diseases to which different tem peraments predispose, 136.
Thomas, Dr F., his theory of the temperaments, 125, 205.
Time, observations on the faculty of, 238.
Travels in Phrenologasto, 88.
Tune, case of Ann Ormerod, in whom it was very deficient, 314.
Turnip story, the, 11.

Vanity of the French, 349.
Veneration strong in Voltaire, 76. Not incompatible with unbelief

82. A chief source of pulpit-eloquence, 198. Strong in Dr Johnson, 339.
Ventriloquism, phrenological explanation of, 14, 98.
Venus de Medicis, head of the, 114.
Vesalius, his opinions respecting the uses of different parts of the brain, 301.
Villermay, Dr, his view of the seat of hypochondriasis combated, 258.
Viscera of the chest and abdomen, not the seat of hypochondriasis, 247.
Visions explained, 54. See *Spectral Illusions*.
Voisin, Dr, on the causes and cure of stammering, 143.
Voltaire, his bust and character compared, 75.
Voyage, practical application of phrenology on a, 33.

Watering-places, visits to, why so beneficial to hypochondriacs, 265.
W. C. M. a ventriloquist, case of, 98.
Weavers of Dundee, size of their hats, 172.
Willis, Dr Thomas, his opinions concerning the uses of different parts of the brain, 303.
Wonder, sentiment of, strong in Dr Johnson, 340.
Wood, Mr John, his system of education at the Edinburgh Sessional School, 215.

THE END.

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